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EDITORIAL.

EUROPEAN CHRONICLES.

"WHITE SCOUR" AND LUNG DISEASE.—I have already called the attention of our readers to these diseases and recorded the interesting investigations that Prof. Nocard has had the opportunity to make in Ireland, assisted by a commission appointed by the Board of Agriculture.

The results have been most wonderful, and again the superiority of the learned bacteriologist has found the opportunity to make itself known, adding to his previous laurels one of no less shining brilliancy. Indeed, as Prof. Mettam remarks on his Report to the Department of Agriculture; to the discoveries already made in relation to tuberculosis and glanders; to the results that may be obtained by repeated injections of mallein in animals suffering with that disease; to those resulting from his investigations of contagious abortion, which caused him to discover its microbic origin and permitted him to prepare a successful preventive treatmant; to his researches which allowed him to discover the true bacillus of contagious pleuropneumonia, a discovery which had long baffled experienced bacteriologists in all parts of the world; and now to all this Prof. Nocard has added the discovery of the disease which is so fatal to newly-born calves, the "White Scour" and the Lung Disease.

The results of his researches, aided as he has been by the assistants officially appointed by the Irish Department of Agriculture, are resumed in brief as follows: The two diseases, in

spite of the difference in seat and symptoms, are one and the same disease: this is caused by a specific microbe or pasteurella, which Nocard identifies with the microbe which in horses produces pseudo-farcinous lymphangitis, and in sheep adenitis and caseous broncho-pneumonia; it is by the umbilicus or navel cord, and at the moment of parturition, that the germs of the malady enter; prophylactic treatment of the umbilical infection will succeed in stamping out Lung Disease as well as "White Scour."

And in his report, Prof. Mettam adds: "Prof. Nocard has placed the agriculturists, not only of Ireland, but of the entire world, under obligations by the most successful issue of his admirably conducted series of experiments and investigations."

I have already told you in the REVIEW of parts of the work carried on in relation to those diseases, and related the treatment which had been decided upon. From the report of Prof. Mettam, I find short statistics of the results obtained by that treatment. The mortality has dropped down to 30 per cent., while previous to it, it had been much higher—35 calves dying out of 36 born, 41 out of 46, 60 out of 70, 90 out of 100. And it is claimed that in that mortality of 30 per cent. there are evidently deaths which would not have occurred had the treatment been carried out to the letter, which was not always the case.

In the meanwhile, when the experiments were going on, attempts were also made to find a suitable therapeutic treatment, principally for those suffering with Lung Disease. A serum treatment was then tested with a few calves, the results of which are so far very incomplete and probably not sufficient to draw conclusions from, yet they are encouraging when the disease is attacked early, as when it is advanced and the lesions in the lungs are serious, very little effect can be expected.

For those of our friends who may desire more information I will refer them to Bulletin No. 1 of the Report of Prof. Mettam to the Department of Agriculture for Ireland at Dublin.

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GLUCOSURY IN RABIES.—When one takes into consideration

the difficulty in which he is placed in making a positive diagnosis of rabies when in the presence of the cadaver of an animal which has succumbed or been killed because of suspicious symptoms, every thing which may enlighten him will always be resorted to, if it can add to his conclusions. On that account the researches which have been made by two teachers of the Veterinary School of Lyon are deserving great attention.

Indeed, M. M. Rabiscaux and Nicolas have worked in that direction, and it is to the presence of sugar in the urine that they have turned their attention.

In various epochs, the existence of sugar in the urine of mad dogs has been proved. Nocard among the first remarked that the presence of glucosury offers a certain interest to the point of view of the *post-mortem* diagnosis of rabies, and that if it had not a positive value, it at least increased the probabilities of the disease being present.

Later on, Porcher, also of the Lyon School, found glucose in the urine of rabid goats, and Gibier has recorded the same discovery in the REVIEW.

The existence of sugar in the urine of some rabid subjects being proved, it became imperative to make the urological examination of the greatest possible number of animals affected with natural or experimental rabies to find out if glucosury was a *constant* and an *early* symptom, and if by that it could become a useful element of *post-mortem* diagnosis of rabies.

The researches for sugar were made simultaneously, and with the object of controlling it, whenever the quantity of urine collected allowed it, with the reaction of Fehling, and in utilizing the propriety that phenylhydrozine has to give with glucose when treated by heat in an acetic medium, a crystalized compound, phenylglucosazone, which appears under the microscope with a typical aspect.

The total of their investigations embraces the examination of the urine of 138 cases, taken among carnivorous, herbivorous, and omnivorous animals, the last being that of a woman affected with hydrophobia.

From these, important conclusions are recorded as follows:

For *carnivorous*, the constancy of glucosury can be considered as an element of diagnosis, affirming the probabilities rising from the history of the case and the lesions found; by itself, taking into consideration the frequency of its presence, it even constitutes a suspicion of the disease. Although not absolutely constant, its apparition being sometimes slow, failure in discovering it cannot allow the practitioner to eliminate rabies.

For *herbivorous*, the presence of glucosury has specially a real diagnostic value, although it may be observed sometimes in other affections than rabies—parturient fever, for instance. The importance of this symptom does not derive its value from its constancy only when animals have died from rabies, but also from the want of characteristics in the lesions observed when information is wanting.

Practitioners, in the presence of a cadaver have now another way to make out a diagnosis in obscure cases.

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ARYTENOIDECTOMY.—There can be no more doubt that this operation has made sufficiently its proofs to be admitted into general practice. The results obtained by the many operators all over the world speak in its favor. But, of course, it is of arytenoidectomy as for all other operations. It has its advocates, and also its adversaries. Some consider it as a panacea for all roarers; others think that it is successful only in exceptions. Both of these opinions are exaggerated, and there exists certainly a just average, which can be well appreciated by the opinion of Prof. Cadiot when he says: "The proof is made, over and over again, arytenoidectomy allows many roaring horses, which we condemned to be tracheotomized, to render much service and do various kinds of work." This is evidently the proper way to consider the indications for the operation.

A great objection has been made, and a serious question has been asked: Why do roaring horses which have been operated upon become roarers after the operation? Explanations of this are quite numerous; extension of the paralytic process to the

posterior crico-arytenoideus muscle of the right side, abnormal cicatricial retraction, producing stenosis of the glottis, chronic laryngitis, general chondritis of all the cartilages of the larynx, etc. But there is another, says Prof. Hendrickx, which is a more or less marked contraction of the entrance of the trachea, and which may occur frequently, and for him results from the transversal section which is made of the tracheal rings—be it the first three, as in the modes of Stockfleth and Gunther, or two, as in the method of Möller, or even one, as in the operation of Cadiot.

To remedy this annoying contraction Professor Hendrickx, in the *Annals de Belgique*, describes his *modus operandi*, with modifications of the methods in use, and which consists in incising the crico-arytenoid membrane, the cricoid cartilage and the crico-trachelian ligament. There are also some little changes of less importance; for instance, instead of the tracheal tampon canula of Möller, he resorts to tracheotomy on the upper third of the trachea; uses a tampon of wadding dipped in Van Switen solution and wrapped in gauze, which he pushes into the trachea; removes the cartilage, but is careful to have a small lamella close to the crico-arytenoid joint; no suture is applied on the laryngeal muquese. When the cartilage is removed the tampon of wadding is drawn into the larynx to control the hæmorrhage and the thread that holds it is secured with the suture that is made to close the external muscular wound.

According to this *modus operandi*, which Prof. Hendrickx has succeeded in executing in ten minutes, cicatrization of the wound goes on rapidly; in three weeks the animal can resume work and has one chance less of becoming again a roarer.

* * *

Latterly, while perusing some of our exchanges inquiring for subjects which would interest our readers, and permit me to deserve a little my claim of European chronicler, my attention was called to a concise article in the journal published by one of the French veterinary schools, which sent my thoughts

flying back to New York, to the United States, and made me ask, I wonder if our veterinary schools in America would do that?

The article was written by one of the professors, the one who occupies the chair of bovine pathology, and consisted into a call that he addressed to all the practitioners within reasonable distance of his place of teaching, for clinical material.

As a foot note to the record of an interesting case, he said: "I would be thankful to those of my colleagues having in their practice animals affected with serious diseases, that for some reason or another owners would not care to have treated, to send them to me."

How professional this case is! how it indicates the desire on the part of its author to gain for his class, for his students, all kinds of opportunities to perfect themselves. He adds: "They will be treated gratuitously, no matter how long the treatment; their traveling expenses to come and return shall be paid; if they are incurable the school will buy them for operative exercises, etc."

Yes, this brought me back to New York, to years past, when clinical material was sometimes hard, very hard, to obtain, and I asked myself if the same condition exists to-day; I hope not, but if it does, why should I not send my American readers, who may perhaps be in the same perplexity, where I have been, the indicator, by which they can remedy their troubles. Veterinarians of America are no less lovers of their profession than Europeans; they are just as ready to help their future young *confrerès;* I am quite sure they would, in the various States, when they are close to veterinary schools, be too willing to furnish the clinical material that those might demand. I do not know if one professor has ever tried it to-day, but I am quite certain that if it was attempted it would bring lots of important material for knowledge, observation and instruction, far superior in quality as well as quantity even to the free clinics that were years ago resorted to. A. L.

EFFORTS WORTHY OF SUCCESS.

We have for a number of years followed with admiration the course of the Maine State Veterinary Medical Association; although having a membership of but a handful of veterinarians, the meetings have been held with a regularity that few larger societies could boast of. Scattered over the State, at points far distant, the devoted members with persistent regularity drop their private affairs and journey to the place designated, and, if for any reason attendance in person is impossible, a letter of regret acts as a proxy, and usually is full of cheering words to those who have gathered together for the annual or quarterly meeting. Seldom have they met and failed to listen to some paper of interest and value, and on each occasion they discuss means of advancing the interests of their beloved profession, while at almost every session of the legislature a committee of this association importunes it for a law to regulate the practice of veterinary medicine. Each year they are doomed to disappointment; but, nothing daunted, they are back at the next session, a little more earnestly, slightly more insistent than in the preceding year. In the present number of the REVIEW, the committee reports its absolute failure to make any impression upon the legislative solons, and in the next breath rallies the members to a renewed effort, and a larger, stronger committee is appointed to carry on the fight at the next session.

Such heroic efforts to elevate a calling cannot fail in the end to be productive of success, and we extend our congratulations, trusting that this noble band may soon place their State in the column with those that have won their laurels, of which the most recent and best example is New Jersey.

THE MINNEAPOLIS MEETING.

The veterinarians of Minneapolis are allowing no stone to be unturned to insure a successful meeting of the American Veterinary Medical Association in their city next September. The local Committee of Arrangements has divided itself into sub-committees to take charge of the different sections of the pro-

gramme; they have visited various neighboring association meetings to enlist their interest, to insure a full attendance of the veterinarians of the Northwest, and to secure their coöperation in making the educational programme so enticing as to invite the presence of those from different sections of the continent. Further, they are urging the men of that territory to associate themselves with the national organization as members, thus strengthening both the association and the profession of that region. From what we know of the local committee, and from all we can gather through a somewhat voluminous correspondence, a safe prediction is that the Minneapolis convention is to be the banner meeting of the A. V. M. A.

In the June Review will be published the first installment of a series of articles entitled "The Living and the Dead: Reminiscences of the Veterinary Practitioners of Forty Years Ago." Fresh from the pen of one of the most conspicuous members of the profession of those days, whose acquaintance was national, these papers cannot fail to be both accurate and interesting. While the history of veterinary education in America has been written in numerous articles, read before associaton meetings or contributed to the veterinary medical press, no attempt has ever been made to depict the *personnel* of the early days of the profession, and thus the reminiscent contribution of this historian will be gladly welcomed.

The rumor was persistently heard in Boston on the occasion of our recent visit to the Hub that Harvard will reopen her veterinary school when the new buildings for the medical department are completed. Messrs. Rockefeller and Morgan have endowed the university with four or five millions of dollars, with which wonderful modern buildings and appliances for the School of Medicine will be created, and the general belief is that she will revive her veterinary department upon a firmer enduring basis than in former days.

ORIGINAL ARTICLES.

TROPICAL ULCERS OF THE HORSE.

By Olof Schwarzkopf, Veterinarian (1st Class) 3d U. S. Cavalry, Vigan, P. I.

One of the tropical diseases from which our American horses are afflicted in the Philippine Islands is an ulcerative skin disease to which the name of "tropical ulcers" has been applied at present. It is most probable that this skin disease has been known to army veterinarians who have been serving in tropical climates before us; at least I remember the description of a disease called "African farcy" in an English veterinary journal, which seems similar to, or may be identical with, our tropical ulcers in the Philippines. However, being without any veterinary literature whatever, I am unable to verify this statement at the present time, but abstain from giving a technical term to a disease which in all probability has been named before.

Symptoms.—"Tropical ulcers" appear soon after the rainy season has set in and gradually disappear after its closure. The favored seat of the ulcers is the inner surface of the lower region of the hind legs, but occasionally they appear as high up as the inner surface of the hock or thigh. They are seldom noticed until well formed, but if a horse already affected is watched, the development of new ulcers can be readily observed.

The primary lesion consists of the formation of a papule of about the size of a ten-cent piece, which is superficial, involving merely the epidermis, and bursts within a day or two, discharging a serous fluid. If the papule is opened and the contents collected in a glass tube, they appear as a clear, amber-colored fluid. After bursting the epidermis collapses, becomes necrotic and sloughs, exposing a round-shaped, suppurating ulcer of the size of a ten-cent piece, the edges of which are markedly well defined. In ordinary cases the number of ulcers does not exceed from two to six, and they remain confined to the region of the fetlock.

Aggravated cases of "tropical ulcers" are exceptional. If seen in full development they present a clinical picture which is quite dissimilar to the ordinary cases. The number of ulcers is greatly in excess of the average, representing fifty, sixty, or more, covering both the inner and outer surface of the hind leg clear up to the stifle. Isolated ulcers may appear on the abdomen, some on the breast, and in one case they were observed on the nose of a horse. In these cases many ulcers become confluent, forming irregular-shaped ulcerations of the size of a dollar or larger. Yet, even in severe cases, the ulcers remain principally confined to one hind leg, which becomes gradually enlarged by an even, doughy swelling which is painful to touch. If such cases finally heal, the horse remains permanently disabled by an enlarged leg resembling elephantiasis.

The American horse is the animal which suffers most from tropical ulcers. American mules are rarely afflicted and no severe case has been observed amongst them. The native pony, too, is seldom seen with tropical ulcers, and if so, does not seem to mind the sores. No ulcers have been observed on oxen and caraboas.

Differential Diagnosis.—The severe cases of tropical ulcers resemble farcy. Such a case is illustrated by the accompanying photograph which was taken in the morning before the sores were dressed, and shows the suppurative discharge from about twenty ulcers covering the inner leg, in dirty, yellowish streaks running down the leg. A competent veterinarian can have no difficulty in making a correct diagnosis, because the ulcers are of even size, well opened and round, do not involve the derma and do not follow the lymphatic vessels. The characteristic farcy buds are, therefore, absent. But the layman considers it a case of farcy at sight, and officers in charge of horses have repeatedly reported so, asking for permission to destroy the animal.

Etiology.—It is obvious that there exists a relationship between the tropical ulcers and the rainy season, because no ulcers have been observed in the dry season, and as soon as this commences new cases cease to appear and those under treatment

heal rapidly. There is no doubt, also, that the specific cause of these tropical ulcers must be a germ, but it is not one easily to be determined. In the twenty microscopical examinations which I have made so far of the contents of papules from different horses, I have not succeeded in finding a specific germ, while the surface of the ulcer abounds in pus-cocci of different varieties. Although these few examinations have given negative results, it must be understood that no facilities are provided

the army veterinarian to do such work, while our army medical colleagues are heralding their secondary discoveries in veterinary medicine with fat headlines in Manila papers and by circulars from Headquarters, with recommendations at once unnecessary and ludicrous because utterly impracticable.

Therapy.—The treatment of the ordinary cases of tropical ulcers is simple and effective. The daily cleaning with water

and soap, the disinfection with some antiseptic lotion and covering with absorbent cotton and bandages brings about a ready cure. Of the antiseptics carbolic acid is the last to be chosen because irritating, while creolin (Pearson) has given the most gratifying results. This and absorbent cotton were liberally furnished during the campaign by the medical supply depot, with which the veterinarian has no relation in time of peace. Next to creolin the white lotion is to be recommended, while ointments of any kind are absolutely to be discarded as the process of suppuration seems to be rather helped along by their use in the tropics.

The treatment of aggravated cases presents a more serious problem. If the whole leg is attacked by tropical ulcers, it is always considerably swollen and painful, and as can be imagined it is next to impossible to keep it wrapped up in cotton and bandages from the restlessness of the horse. If this is not done the ulcers gradually get beyond control, and blood poison sets in with fatal result. In those cases which are finally cured, after months of treatment, the leg remains permanently enlarged, dotted with star-like scars which become easily sore again, thereby preventing any use of the horse, so that he has to be condemned as unfit for service.

From the facts so gathered it has become evident to us that all depends upon an early and correct treatment of the tropical ulcers, to heal them, so to say, in their first stage of development. This is not always attainable in an army in the field, because the demand for horses is great, they are kept marching constantly, and the utter absence of proper veterinary equipments for actual warfare does the rest.

"I HAVE been a subscriber to the REVIEW through a news agent of this place for one year, beginning with the first of Vol. XXV, and I do not see why I ever went so long without it, as I have been practicing veterinary medicine and surgery for 18 years; it surely is a valuable visitor, and I will never be without it as long as I am able to pay for it. I have had some rare cases in my practice, which I will try to describe some time when I have time for the REVIEW."—(*L. T. Lewis, Gallatin, Tenn.*)

RABIES.

By D. E. Baughman, M. D. C., Fort Dodge, Ia.

Read before the 14th Annual Meeting of the Iowa State Veterinary Medical Association, Feb. 11 and 12, 1902.

At the earnest request of the President and Secretary I have endeavored to prepare a paper on rabies, a disease that has interested me the past season, and I hope I will be successful in interesting other members of the association.

There has, perhaps, never been a time when it was more important than at the present for the veterinary profession to have a clear appreciation of the subject of rabies in animals and man. There was a time in the period of the profession's existence when there was excuse for differences of opinion in regard to this disease. It was a time when we depended solely upon clinical observation of accidental cases, and when the conclusions were founded upon imperfect evidence. But that time is past. To-day we have a science resting upon an experimental basis. Facts and conclusions have been established just as rigorously and as solidly as in other departments of medical science.

As members of a learned profession it is our duty to know what has been accomplished by scientific investigators of rabies, and particularly is this duty incumbent upon those who attempt to teach other members of the profession or the laity as to the facts in the case. We have reached a point where the intelligence and scientific knowledge of the veterinary profession are liable to be unjustly questioned because of a few mistakes of misguided individuals who persist in reiterating beliefs which were never held by a majority of the profession and were discarded and disproved years ago. It appears to the writer simply astounding that there are educated men, much less physicians and veterinarians, who will still doubt the contagiousness of this disease, which was known and described in ancient times, and which for a century has been the subject of experimental investigation by very able men who have occupied their minds with pathological questions. Nevertheless, it is a fact that the sani-

tarian of to-day who tries to control rabies meets the same kind of argument which was used to embarrass his profession centuries ago. These arguments are most industriously circulated by the so-called humane societies, which oppose all conclusions based upon experiments with animals and which imagine that they are doing a great work for dogs and cats by casting discredit upon science, even though by so doing they perpetuate this terrible disease, of which dogs and cats are the principal victims.

Aristotle described rabies 400 B. C., and indicated its transmissibility in these terms: "Dogs suffer from hydrophobia, which provokes in them a state of madness; all animals bitten by dogs affected become rabid in the end." From that time to the present we have clear accounts of the disease existing through every age and provoking horror and fear in many centuries. It was always said to be caused by the bite of an animal, which animal was generally alleged to be rabid. It was almost universally described as fatal in man and animal.

Aristotle admitted that the disease was fatal to dogs and every other creature which they bite, except man. This early mistake in regard to immunity of man has been handed across the centuries and is still repeated on every hand by those who oppose measures for the prevention of the disease. It may be freely admitted, therefore, that there have probably been many at all ages who have doubted the existence of the disease, both in mankind and in animal, that numerous articles and books have been written to prove that the disease called rabies is not contagious, and that the supposed rabies of man is lyssophobia, a nervous affection brought on by fear and excitement.

The medical profession as a whole, however, always recognized the existence of such a disease as rabies in man and the veterinary profession has from its foundation recognized its existence, and the contagiousness of the disease. Its schools from the earliest to the latest have constantly taught this doctrine and the present text-books are all unanimous on the subject.

The doubts raised from time to time concerning rabies and

its characteristics have been met by scientific experiments.

Zinka, in 1804, announced that he had inoculated a dog, a rabbit, and a cock with saliva from a rabid dog, taking the saliva with a brush from the animal soon after its death and spreading it over superficial wounds of the inoculated animals. The dog was inoculated on an anterior limb and showed prodromic symptoms on the 8th day and was rabid on the 9th. The rabbit was rabid on the 14th day and cock on the 11th day. This experiment, early in the 18th century, proved that the disease of the dog, called rabies, was communicable by inoculation to the dog, the rabbit, and the fowl. It proved it to be a specific disease, and that the virus existed in the saliva.

Reifershield, in 1813, records an experiment in which several dogs were inoculated, part with fluid and part with dried saliva from a rabid dog. These became affected with rabies after 8 to 10 days.

Bendt, in 1822, inoculated four wethers with saliva from the mouth of an ox which had died of rabies. All of these sheep contracted the disease, the period of inoculation being from twenty-two to thirty-one days.

In Hertwig's experiments, he produced rabies by inoculation in 37 per cent. of cases. Renault produced it in 67 per cent.

Haubner gives an average of 40 per cent. of cases in rabies which was contracted through bites. Bollinger states that in man infection occurs in from 8 per cent. to 47 per cent. of bites. Pasteur says the proportion varies from 16 per cent. to 80 per cent. When cauterization is not performed, it reaches 83 per cent. Bouley found that 90 per cent. suffered after bites on the face; 63 per cent. after bites on the hands; 24 per cent. after bites on the arms; 77 per cent. after bites on the legs; and 63 per cent. after bites on the body. The susceptibility of sheep is known to be slightest, as the teeth of the biting animal are likely to be cleaned on the wool. Much, however, depends upon the stage of the disease, and the abundance and virulence of the virus in the saliva, as well as upon the susceptibility of the subject. Some animals are insusceptibile, either naturally

or by reason of their having been previously subjected to the action of the virus. Yet, under a full virulent dose, nearly all succumb. The theory that rabies kills more animals in summer than in winter has been weakened by statistics. Burrell has shown, according to the record of cases of rabies in his infirmary from 1859 to 1872, that they were not more frequent in summer than in winter. Three hundred and fourteen cases of rabies of the dog observed at the Alfort school during the years of 1887 to 1890 are divided as follows: January, February and March 130 cases; April, May and June 60 cases; July, August and September 50 cases; October, November and December 47 cases. Bouley records a greater number of cases in December, January and February than in any other three months of the year. The real explanation of the greater prevalence in the spring and summer is found in the fact that bitches rut in the spring and a number of the candidates for their favors bite each other fatally. This is aggravated by the fact that the generative instincts are stimulated in the early stages of rabies. This further explains the predominance of rabies in males. The irritable rabid dog antagonizes his male competitors and respects the female object of their common desire. There is, of course, only one cause of the disease, namely, inoculation from an animal suffering from the disease, although excitement will hasten the eruption in the inoculated animal.

It may be assumed that the virulent principle which causes the disease is an organic germ, but so far all attempts to isolate and cultivate it in pure culture have resulted in failure and the microbe cannot yet be certainly identified.

Rabies agrees with all other germ diseases, in that it develops only after inoculation, in that one attack usually fortifies the system against a second, and that in Australia, Tasmania, New Zealand, St. Helena, South Africa, and West Africa, from which mad dogs are excluded, it has never appeared, while in Buenos Ayres, Hong Kong and Malta, where they have been allowed freedom, it has become prevalent. What has never occurred in the past never need to be looked for in the future.

Cases in which infection is denied because the dog was shut up will be explained by a more thorough investigation. Rabid dogs will leap high fences to reach supposed enemies, and rabid rats and other vermin enter through small holes.

Rabies, like most microbian diseases, is at first confined to the region of the bite and the tissues there alone are infected. When fully developed the infection is resident in the blood and all vascular tissues, yet the usual source of infection is through the bronchial mucus and the saliva, both of which are especially virulent and are naturally implanted by the teeth. This virulence is not confined to carnivora, but has been experimentally demonstrated in omnivora and herbivora. Various cases of infection from man to man are on record. Drying of saliva or blood, apart from heat or putrefaction, does not destroy its virulence. The knives fouled on rabid animals have been used for successful inoculation months and years later. Among other methods of infection, besides the bite, may be named the licking of sores by a dog in the early stages of rabies and the occupation of kennels or stalls that have previously harbored rabid animals. Rabies has been known to attack a second pack of hounds after the first pack had been killed out because of the disease. In one case a man was infected by using his teeth to untie a knot in a rope that had been used to tie a mad dog. Infection in man has been caused by a bite from a dog that had been previously fighting a rabid dog, and again from the scratch of a cat that had been licking its claws. In some cases of incipient rabies in dogs the saliva has been virulent before any outward symptoms were shown. Hence, all dogs, however sound in appearance, should be objects of suspicion in an infected district.

The anatomical alterations found in autopsies upon rabid animals are neither constant nor specific. Rabies is especially characterized by the absence of important organic lesions. There is emaciation, mucus about the eyes, mouth, nostrils and prepuce; staring coat; venous congestion; the tongue has a dirty brown fur; in the dog foreign bodies, such as straw, hair,

pieces of wood and clothing, may be found in the mouth and pharynx; the stomach is congested and contracted; it contains little or no food, but a mixture of foreign bodies, and indigestible substances which are highly characteristic of the disease. Wortley Axe in a total of 200 autopsies has found in 180 cases, or 90 per cent., absence of food, and the presence of indigestible foreign bodies in the stomach. For him, this latter fact is the most important from a diagnostic standpoint. Post-mortem diagnosis can be established with certainty only by inoculation, but when at the autopsy of a dog which has manifested aggressive tendencies during the last period of life, or which has bitten animals or people, we recognize the ordinary symptoms of rabies, especially the presence of foreign bodies in the stomach, we must, without hesitation, affirm the case to be rabies and proceed accordingly.

Babes describes changes in the nerve cells with cloudiness of the protoplasm. These have been especially noticed in connection with the motor centres in the medulla oblongata, but also in the gray matter of the cerebrum. The nerve trunks, too, may be the seat of congestion, and the fibres undergo a granular degeneration.

The lesions to be especially relied on in the dog are the congestion of the fauces and throat; the congested, infiltrated, or ulcerated state of the stomach; the absence of food; the presence of foreign bodies; some congestion of the small intestines; empty, or nearly empty, bladder; mucus or muco-purulent secretion oozing from various openings; congestion of superficial veins; congestion of the brain and meninges. These with the history of the cases are usually sufficient to identify the disease. It should be added, however, that in the paralytic or lethargic form in the dog there may be an entire absence of foreign bodies in the stomach.

Of the 17 cases in the dog that I have met with in my practice in the last year, most of them were of the paralytic form. Seven out of the 17 cases have been of the furious form. Ten of the animals were either known to have been bitten or had been

exposed to rabid dogs. The remainder were not exposed to the disease to the knowledge of the owners, yet it is possible that they were, not having been confined and having had access to the street at will. The period of incubation varies greatly. In inoculation with potent virus or street virus upon the brain, it is six days. In other parts of the body it varies from 16 to 240 days, with an average of 25 days.

Rabies appears under two clinical forms, which are designated by the expression of furious rabies and mute rabies. Formerly these two forms were considered two distinct diseases, but this view has been abandoned long ago.

According to Pasteur furious rabies occurs when the brain is invaded by the rabid virus, and mute when it reaches the spinal cord first. His claim is that we may produce the former experimentally by directly depositing the virus on the surface of the brain, the latter by injecting it into subcutaneous connective tissue. I rather doubt the correctness of this assertion, as I am inclined to think that only a very small per cent. of dogs are bitten on the face compared to the number bitten on other parts of the body. While in man the per cent. of bites on the face is very small, the majority of cases of rabies in men are of the furious form. By depositing the virus directly on the brain, it produces a disease within a very short period of incubation, which possibly accounts for the activity of the symptoms excited by this form of inoculation.

The prevention of rabies can be accomplished in cities and towns only by passing ordinances and compelling owners to muzzle their dogs when the outbreak occurs in a community. The animal should wear an efficient muzzle, as rabies is propagated in nature only by biting. Such a regulation, if strictly enforced, would stop the transmission of the disease, and soon lead to its disappearance.

As the disease is just as prevalent in winter as in summer, the dogs should be muzzled the year round, until the disease has made its entire disappearance. However, this is at once opposed by a class of citizens holding it to be cruel and unnecessary.

Some muzzles are unquestionably cruel, but a properly made muzzle is not cruel, nor does it greatly inconvenience the dog after he has become accustomed to it. A certain kind of muzzle should be prescribed by the authorities. It should be one which covers the mouth with a wire cage so as to prevent biting, but which does not interfere with the movements of the mouth and the ingestion of liquids. There are many who claim that the dogs do not wear the muzzle at home and that when they develop rabies and escape it is always when they are not muzzled. Admitting this argument to be true, nevertheless it is a fact that if all dogs were required to be muzzled when in public, the appearance of a dog without a muzzle would at once attract attention, leading persons to avoid it and causing its early seizure by the authorities. Children might be taught to fear unmuzzled dogs and to keep at a distance. The results which have been attained by muzzles justify the enforcement of a muzzling ordinance whenever there is an outbreak. In Berlin, where a rigorous muzzle law was enforced, the disease was entirely eradicated. Also, in Great Britain the muzzle has been adopted with great success.

The treatment of the bite should receive first attention. If possible, the wound should be cauterized by actual cautery. If not, chloride of zinc, bichloride of mercury, caustic potash, silver nitrate, or sulphate of copper or iron should be used Care should be taken to apply it thoroughly to all recesses of the wound. If mineral acids or other liquid caustics are employed, they may be delivered into the minute recesses through a pipette or a plug of cotton wound around a stick or with a syringe. A delay of several hours or days is no warrant for omitting cauterization, for in man it has always a good moral effect in preventing hydrophobia, and it is also possible that the poison may remain for some time in the region of the sore.

Senn's advice is to excise the adjacent tissue. This may be followed, but not to the exclusion of a thorough disinfection.

When a person has been bitten by a dog with symptoms of rabies, the dog should not be killed, but should be chained in a

place where it will have no chance to do harm to any one. There it should be kept until the disease has had a chance to thoroughly develop. If it dies from rabies, and the bite has not had the necessary treatment, the bitten person should at once take the now famous Pasteur cure. The Pasteur Institute at Chicago has been established eleven years, in which time 1262 patients have been treated. Of these only seven have died, making a death rate of less than one-half of 1 per cent. As a remedial agent for the bitten the Pasteur treatment is unquestionably effective, as is shown by the great per cent. of cures.

DISCUSSION.

Dr. Lyford related a case of rabies in a horse. The horse was bitten by a dog on the nose and later on the hind limb while being driven through the street by his owner. The offending dog was killed. On the 20th day the horse was reported by the owner to be acting strangely. Dr. Lyford visited him, found him acting violently and showing a great tendency to bite every one except his owner, who could handle him without difficulty. A diagnosis of rabies was made and the owner instructed to tie him with a chain. The next day the horse was much worse and the tendency to bite was much more developed. The stall bore marks of the animal's teeth and his mouth was injured and bleeding. A broom was held out to the horse and he grasped it in his teeth and shook it as a dog would shake a rat, then lay down and rolled upon his back still holding the broom firmly in his jaws. The horse was killed, and the head sent to the University of Minnesota. Three rabbits were inoculated subdurally and in due course of time developed rabies.

Dr. Repp described the microscopic changes detailed by Van Gehuchten and Nelis in Europe and later by Ravenel and McCarthy in this country.

Dr. Brimhall reported a case in his experience in which it was proven by successive rabbit inoculations that the milk of a cow suffering from rabies was virulent and capable of producing rabies.

A FATAL CASE OF INDUCED TEXAS-FEVER.

By Dr. Charles F. Dawson, Professor of Veterinary Science, Florida Agricultural College.

It is a fact well known to bacteriologists that animals may be made susceptible to bacterial diseases from which they are ordinarily immune. Chickens are immune from anthrax, but Pasteur was able to remove this immunity by immersing them in cold water. Infections may be rendered more acute when complicated with the presence of another micro-organism, or with the product of other microbes, and some chemicals. The *Streptococcus erysipelatis* may lose its pathogenicity from artificial cultivation and fail to kill rabbits when inoculated into them. Its pathogenic properties may be regained, however, if the rabbit is injected at the same time with the products of *Bacillus prodigiosus*. The same is true of quite a number of micro-organisms. Thus, double infections in tuberculosis run a more rapid course. In some diseases, for instance, in a double infection of anthrax and erysipelas the animals may not die of anthrax, which is ordinarily fatal, but frequently does die of erysipelas, which under other conditions might have been harmless. This shows that while the products of erysipelas antagonize those of anthrax, the toxin of anthrax increases the toxicity of the erysipelas toxin. The introduction simultaneously of certain substances into the tissues along with microbes frequently increase their pathogenicity to a very marked degree. For instance, the addition of an organic acid, lactic, or acetic, for example, to cultures of *B. anthracis symptomatici* increases its virulence. It is well known that scrub cattle are much more refractory to this organism than graded and blooded cattle. In fact, it is difficult to cause a fatal infection of black-leg in scrub cattle. In every instance I have been able to produce a rapidly fatal infection in scrub cattle with cultures, or dried spores of the bacillus of symptomatic anthrax, by the simultaneous injection of an insoluble material, such as sterile plaster of Paris, fine sand, or ground glass. These results can be ex-

plained upon the theory of the devitalizing action upon the tissues of the insoluble substances injected. Bruising the tissues at the point of inoculation also is known to aid infection. Surgical operations, such as dehorning and castrating at the time of vaccination, are advised against by the manufacturers of black-leg vaccine. Vaccination produces a mild, non-fatal type of black-leg which frequently takes on extra virulence and ends fatally when the above operations are performed at the time of vaccinating.

This very interesting case, bearing upon the foregoing statements, recently occurred in my practice. It is known positively that most southern cattle are permanently infected with the Texas fever parasite—the *Pyrosoma bigeminum* of Smith. They, therefore, may be said to be somewhat in the condition of an animal vaccinated against blackleg, *i. e.*, they have the disease in a clinically unnoticeable form. The animal was a native work-steer, about five years old, in rather poor condition, but apparently healthy. It and two others of the same age and some yearlings had been purchased for fattening, and it was deemed advisable to dehorn them. The operation was performed by the owner with shears without any precaution as to surgical cleanliness. Ten days after I was called to treat the animals. I found the three five-year-olds all apparently sick, one being almost too weak to stand. The temperature was only 99.5. There was considerable nasal catarrh and lachrymation. I removed a foul-smelling plug of raw cotton from the horn stump. There was considerable pus in the cavity, and I picked out several spicules of bone, driven there by the crushing action of the shears. The lining membrane was much reddened and bled easily. The cavity was cleansed, dusted with an antiseptic powder, closed with medicated cotton soaked in tar, and capped with another layer of cotton. The nose was washed out with a warm solution of normal sodium chloride and boracic acid, and the animal given a stimulant hypodermically. As bloating had already occurred, the rumen was tapped, thus relieving the heart and lungs, and an antacid was administered.

Late in the afternoon I was called again, and found the animal dead. A post-mortem examination was made the next day. There were evidences in all organs of a high blood pressure, and a perfect picture of Texas fever. The heart had the usual blood extravasations in its substance, as had also the pericardium. The liver was yellowish from bile stasis. The intestine and kidneys were reddened. The spleen was much enlarged and contained the dark tarry pulp always found in the disease. Cover-glass preparations made from the blood and various organs showed the intracorpuscular parasite of Texas fever. There was no ticks on the animals. The other two adult steers seem to have recovered, while the yearlings did not exhibit signs of disease.

I regard the case one of induced Texas fever. In an animal of this age dehorning, while generally considered a minor operation, is one of considerable importance, and undoubtedly makes a serious impression upon the animal economy. More especially, if the animal be a little below par as regards condition, or if a catarrh of the frontal senuses result from the operation, one should not, in the light of existing knowledge upon the subject, be surprised that latent diseases or infections take on new life. Additional cause for the lighting up of the latent Texas fever in these cases was the change from a poor diet to a highly nutritious one, consisting of cassava, velvet beans and shorts.

It has been shown that if southern animals be plunged into insecticidal solutions to rid them of ticks, and then be shipped long distances under adverse conditions, a considerable percentage of them will develop their latent Texas fever into a fatal form of the disease.

GLANDERS has broken out in the stables of the Street Cleaning Department of Brooklyn, and the Board of Health recently destroyed fourteen, and placed nineteen suspects under quarantine.

"YOUR paper is better than ever, and *we all* should try and keep the standard up and improve. 'Nothing succeeds like success.' Now let us help make 1902 better than 1901."—(*W. E. French, D. V. S., Daytona, Fla.*)

ABORTION IN COWS.

By Peter Malcolm, V. S., New Hampton, Ia.

Read before the 14th Annual Meeting of the Iowa State Veterinary Medical Association, Feb. 11 and 12, 1902.

This question is one of great importance to the veterinarian as well as to the breeder of cattle. Abortion, using the general meaning of the term, is the expulsion of the fœtus before it is viable.

The common causes of abortion in cows are external injuries, such as one animal butting another, squeezing through narrow places, slipping and falling, kicks from vicious attendants; in fact, any injury to the abdomen may produce it. Causes of a more obscure nature are internal, such as an abnormal or diseased condition of the uterus; inflammation of the bowels, kidneys, bladder or lungs; indigestion in the acute or chronic form; evolution of gas in the intestines sufficient to cause irritation to the uterus or interfere with its circulation; diarrhœa, whether caused by irritant food or reckless use of purgatives. The presence of a calculus in the kidney, ureter, bladder or urethra may cause a sympathetic disorder of the uterus and expulsion of its contents. Irritant poisons that act on the urinary and generative organs, such as cantharides, savin, tansy, ergot, smut, and various fungi that are found in decomposing vegetable matter. Another cause, and one of great importance, is bad ventilation or any like condition which interferes with the normal oxidation of the blood. The importance of keeping pregnant animals in well ventilated stables can be seen at a glance when you take into consideration the condition of their blood which contains an excess of water and a smaller proportion of albumen and red corpuscles. This condition, aggravated by bad ventilation, decomposed animal and vegetable matter, poor food and stagnant water, is almost sure to result in abortion.

The dam with all her diseases and the accidents that may be forced upon her is not the sole cause of abortion. To the

sire a great deal of this trouble is due, and this should not be lost sight of, as he plays a prominent part in the transmission of disease. In the first place, it is not reasonable to suppose that a sire that is overworked can produce strong and vigorous spermatozoa. When this weakened spermatozoön comes into contact with the ovum, the chemical constituent will be of a debilitated character, which will, if it develops, ultimately cause disease of the fœtus or its envelope. Furthermore, this overworked sire is in a condition, on account of the weakened state of his generative organs, which furnishes a favorable field for the development of vigorous microbes, which, when the act of copulation is performed, are carried into the vagina. Together with the spermatozoa these germs enter the uterus and there develop, causing disease of the fœtus or its envelope, which may bring about abortion, or, if not, will produce disease of the offspring.

Another cause and one of great importance is infection. In some instances its origin is obscure, but the majority of outbreaks can be traced to neglected cases of simple or accidental abortion. In this form of abortion there is no longer a doubt as to the pathogenic agent, as science has proven beyond a doubt that it is due to a micro-organism. Such conditions exist and we are called upon to treat them. To do this successfully it is necessary to understand the character and pathological action of this organism. It is a pathogenic microbe developed in decomposing animal or vegetable matter. It enters the system by way of the respiratory or digestive tract, the vagina or any abrasion of the skin. Gaining access to the blood it causes putrefactive fermentation, which produces an irritation to the sympathetic system and death to the fœtus.

The treatment of this disease, or more properly speaking this deuteropathy, requires tact and energy, as the condition and circumstances that favor its progress are numerous and of an obscure nature. Overlooking a seemingly trivial condition may lead to serious consequences. An essential point to be considered in the preventive treatment is to see that the sire and

dam are in a healthy condition before mating them. The sire should be kept away and not allowed to run with the cows, nor should he be allowed to have intercourse with a cow that has aborted for at least three months or more, and then should be allowed only one service. On no day should he serve more than three cows. The cow that has aborted should not be bred until after the period at which she would have given birth naturrally, for in the majority of cases, if an aborting cow become impregnated, she will abort when that period is reached.

In the treatment of a herd for abortion, do not wait to see if it is going to take on the epizoötic form, for delay is dangerous. One neglected case, no matter what the cause is, may cause abortion to every cow in the herd. Therefore, it is very essential to remove the cows that have aborted, thoroughly disinfect them, burn the placenta, destroy the fœtus, and all other débris that may have become contaminated with the fluids and disinfect the stable. For disinfection I would advise carbolic acid, as my experience has taught me to believe that carbolic acid is not only a specific in the destruction of this particular microbe, but that it arrests the fermentative changes that favor its development. In using carbolic acid in cases of this nature, two things should be noted: first, that the inhalation of the fumes is necessary inasmuch as they arrest and destroy germs that may have gained access to the air passages; second, that if used too freely it may cause an irritation to the respiratory organs sufficient to produce inflammation of the lungs. A safe formula and one of sufficient strength is one ounce of carbolic acid, one half ounce of glycerine and 16 ounces of warm water applied once a day for four or five days to the floor of the stable and to the rumps and tails of the cows. Internally give in drinking water once a day for three or four days about 4 drams of hyposulphite of soda.

Again allow me to impress upon your mind that the microbes must gain access to the blood before they can do any harm. Also, that the injecting of the vagina is useless and that the irritation thus produced will cause abortion; and

that the success in mastering this disease depends on the sanitary conditions.

DISCUSSION.

Dr. Scott asked Dr. Malcolm if he has by his method ever been able to arrest the disease when once well established in a herd. Dr. Malcolm said that in one herd of 20 cows 19 aborted in one year. He treated the herd, and the owner got a new bull. The next year only a few aborted. In another herd of 15 cows 7 aborted in one year. He treated them, and, although three years have elapsed since, there have been no more abortions. He always has the stables disinfected when the cows are put in in the fall.

A VALUABLE INVENTION.—For years the great mercantile houses have had no end of trouble in keeping up their horse establishments. The trouble arose out of overdriving of the horses chiefly, though many other things entered into the matter. Many merchants have said time and again that they would like to keep more handsome horses and wagons, but it did not pay them, for they could not get drivers on whom they could rely. Now, in New York a perfect tab can be kept and is kept on every driver that goes out from several of the big houses. This is what is known as the "speed and stop check." It is about the size of a small alarm clock and is fastened after the manner of a cyclometer on the rear axle of the rig. On the dial are marked the hours of the day. One large hand goes around this just as in the ordinary clock. Another dial is arranged so that the hand on it only goes when the wheel turns. As soon as the wagon stops that hand stops, and it does not go again until the motion is once more on. In the meantime the time hand keeps moving steadily along. The smaller dial also indicates every quarter mile traveled, marking it off automatically. Thus, by comparing the reading of the two dials the stable boss, on the return of the wagon, can tell how many stops were made, at what rate the horse was driven in each quarter of a mile, and how long the wagon traveled between stops. In that way a driver's trip sheet can be checked off to a nicety and the stable boss can tell just as well as the man who drove how the journey was made.—(*Breeder's Gazette.*)

BARIUM CHLORIDE IN VETERINARY PRACTICE.

By J. C. Callander, V. S., Parkersburg, W. Va.

All the veterinary medical works that mention at all the above remedy as a curative agent, say so little about it, and so advise against its use, that I am a little timid in giving my opinion in its favor; but I am such an ardent admirer of the remedy that I cannot withhold a few words that I wish to say in its favor.

Ten-grain tablets of barium chloride are always within my hypodermic case, and I no more think of going to see a case of colic or indigestion without it, than I would go without my hat. I know all about the bad results that have attended its use. I was there myself, and the horse was dead five minutes after I entered the barn, but that was before I knew how to use barium.

In my hands it is far superior to eserine in the majority of cases, though I think there are cases where eserine will give better results, but such cases are greatly in the minority. As is, I think, the fact in ninety per cent. of all cases of colic or indigestion, the feed is the disturbing agency; to evacuate the bowels is to relieve the trouble, whether it be gases or undigested food. This (a 10-gr. dose of barium chloride) injected into the jugular vein, will bring the desired results almost as quickly as I can tell you about it. I sometimes say to my client, that little insignificant dose is guaranteed to cause the bowels to act in five minutes. The first operation is usually inside of three minutes, and then perhaps ten evacuations in less than half an hour. Such results cause the owner to stand in open-mouth wonder. If there is much gas in the posterior bowels it will usually bring it away with a rush. Of course, I am exceedingly careful in using this drug and ascertain that the temperature is not much above normal, and that the heart is reasonably strong. If the horse has been ailing for some time (say from 12 to 24 hours), I do not get as good results from it as I do when I see the patient early in the attack, but in the usual

every-day cases, it gives me very happy results, and often allows me very much sooner to go home to my bed. I think I have gotten many a good hour's sleep—thanks to barium chloride. My client has been better satisfied; more willing to pay my bill, and the poor horse has been saved a long spell of sickness and much pain.

Of course, this is not all my treatment. I use the capsules almost exclusively in the administration of drugs given by way of the mouth. Turpentine is a very valuable remedy, and, like barium, has an advantage in the way of cheapness, which is very desirable. Two ounces of turpentine, to which I add nux vomica fld. ext. and capsicum. I usually throw down the old Barbadoes aloes pill, quite a slow remedy in acute troubles, but it comes along behind and does its work a day or so later.

I started out to tell of barium chloride, but think other remedies all right in their places.

Where the stomach is overloaded with food or gas neither barium nor eserine are indicated. Eserine perhaps would intensify that condition in the stomach, and likely cause rupture of its walls. Barium would not be of any use, as its action is principally on the small and large intestines. All remedies fail sometimes, even when we think indications are good.

I have 10-gr. barium tablets. My hypodermic syringe just holds one drachm. I dissolve the tablets in a teaspoon, draw it into syringe, being very careful to exclude air, having my needles always as aseptic as possible; wet the surface over the vein with alcohol or creolin solution, raise the vein with my finger, insert needle quickly, and inject very slowly, giving fluid time to go into circulation by degrees.

Since I have used that procedure I have had no bad results. I have repeated the dose after half an hour with good results. In some cases there is evidence of considerable pain, but nothing to be compared with the shaking up that the system gets after an injection of eserine.

Hoping that this little talk of mine may cause some that are not using barium to give it a trial, and if they are reasonably

careful they will think much of the remedy. I should have added that in some cases you may miss the vein, but if you do the results will not be as good, and a hardened mass will appear at the point of injection, but this will absorb usually by using some iodine preparation.

A CORRESPONDENT recommends ten-drop doses of pure carbolic acid in half pint of water for indigestion in sheep, claiming that one dose will usually be sufficient, but can be repeated in doses of five drops.

HORSESHOES. — Iron horseshoes permanently fixed to the hoofs were introduced in the fourth century of the Christian era. On the grassy plains of Asia and on the open ground elsewhere shoes were not needed; but the Romans soon found that their paved roads wore the hoof away and often lamed an animal when his service was the most needed, says the Chicago *News*. They could devise no better remedy, however, than leather soles and bags to protect the hoof, though there is reason to believe that they had an iron shoe which they put on and took off at pleasure. Some writers are of the opinion that the later Romans had learned to nail the shoe under the hoof; but it seems possible that the crescent-shaped horseshoe of modern times was first invented in some parts of Asia.

FILIPINO BULL-FIGHTING.—Dr. G. H. Locke, serving in the United States army in the Philippines as chief veterinary surgeon, makes some remarkable statements, in a letter just received, concerning the continued prevalence of bull fights. He declares that he witnessed a scene a few months ago which caused his hair to turn white. It was at a bull fight, Dr. Locke writes, and several natives were killed within an hour. Three were gored to death by the enraged bull, and the spectators applauded the horrible spectacle. Three were killed by being thrown from their horses, each being dragged to death, his foot having caught in the stirrup. While the horse was dragging the unfortunate victim the band struck up a lively air. The last victim of the day was killed by an accident. One of the men threw a javelin at the bull, and it went over the beast and struck a man in the breast. A comrade came dashing by, and seeing the wounded man dismounted, drew a large revolver and beat him on the head until he was relieved by death. Dr. Locke says these exhibitions are given without the knowledge of the chief authorities.—(*N. Y. Herald, Apl.* 6, *1902.*)

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his fact in building up the solid edifice of pathological science."

TYPHOID FEVER IN A HORSE.*

By L. U. SHIPLEY, D. V. S., Sheldon, Ia,

The subject of this report was a bay gelding, 6 years old, weighing about 1100 lbs., that was bought by a dealer and put on feed to condition him for market. About a week or ten days later our attention was called to the case. The groom stated that he did not eat well. After a casual examination we concluded that it was a case of indigestion, and treated accordingly. However, his condition did not improve. By this time he had begun to show emaciation, eating sparingly of hay and grain at times, and at other times refusing grain entirely and drinking but little water. He was observed to yawn or gap, and to grind the teeth and assumed a position when standing similar to that of a horse about to urinate, seemingly desiring to tense the abdominal muscles. He had a tucked-up appearance of the flanks and was also restless when lying down. The fæces were of natural color, but soft and resembling the fæces of a cow in consistency. Loud borborygmi were constantly present; the temperature ranged about 103°, the pulse about 72, but otherwise normal in character; respiration was normal; visible mucous membranes presented some small petechial spots. Pressure over the abdominal region seemed to cause no perceptible pain. The hair was sleek and glossy throughout the course of the disease. The csse remained about the same except a progressive emaciation, presenting the foregoing symptoms with more or less intensity for some eight weeks, when the symptoms became more alarming and he died the following night.

The next forenoon we made a post-mortem examination and found considerable wine-colored fluid in the abdominal cavity; the peritoneum presented a thickened, softened condition, showing peritonitis to have been the immediate cause of death. Upon removing the small intestines we found the mucous layer much tumefied, as though having been affected by a catarrhal

* Read before the 14th Annual Meeting of the Iowa State Veterinary Medical Association, Feb. 11 and 12, 1902.

inflammation for some time. Peyer's and other lymph glands presented different stages of ulceration, with one or more distinct perforations. The ulcers were distributed throughout the length of the small intestines and varied in size from that of the end of a lead pencil to one inch in diameter, many of them presenting a yellowish-brown scab or slough not yet thrown off. All other digestive organs were normal in appearance.

After having searched all the veterinary text-books at our command we sought some information upon this interesting case from works upon human pathology, and in their treatises on typhoid fever we found the following summary: "An endemic, infectious fever associated with constant lesions of the lymph follicles of the intestines; first, hyperplasia followed by ulceration of the solitary Peyer's and other lymph glands due to the bacillus of Eberth."

The symptoms of the foregoing case: first, the continual presence of fever; second, the peculiar looseness of the bowels; third, the ulceration, perforation and consequent peritonitis are all characteristics of typhoid fever in man. Consequently the application of the title of this report. That the lesions were due to the bacillus of Eberth as in man we have no proof, having made no bacteriological search.

DISCUSSION.

Dr. Repp said that, inasmuch as eminent investigators are unanimous in the opinion that typhoid fever, as we know it in the human being, does not occur in the domestic animals, he could not adopt the opinion of the author of this report that this was a case of typhoid fever.

OPEN JOINT.*

By J. THOMSEN, V. S., Armstrong, Ia.

About December 1, 1901, a well-bred Percheron mare had, by kicking over a barbed wire fence and becoming fast, received a wound in the anterior part of the tarsal joint. Considerable force had been used by the animal in attempting to free itself until it was finally assisted by its owner. The wound was in a horizontal direction, not over one and one-half inches in length and seemingly not very deep. As there was no perceptible hæmorrhage and the mare walked as well as ever when led to the barn, the matter was thought to be of minor importance.

* Read before the 14th Annual Meeting of the Iowa State Veterinary Medical Association, Feb. 11 and 12, 1902.

Upon a neighbor's advice a quantity of dry or air-slaked lime was pressed well into the wound daily. The mare was led a short distance to water twice a day and showed no discomfort whatever for the first four days following injury, but on the morning of the fifth day there wrs a change. She appeared much distressed, showed partial loss of appetite, and scarcely any weight could be carried on the affected limb. The owner, living at some distance from here, watched this condition for three days and then asked for my assistance. As soon as seen I considered the case quite hopeless. This opinion was due somewhat to previous experience, having seen a number of similar cases. I always had felt justified in advising their destruc tion, which as a rule would be carried into effect.

There was a profuse flow of synovia from the opening slightly to the inside of the median line, but which on careful examination appeared to extend backwards and inwards, possibly under the lower border of the tendinous slip of the flexor metatarsi which attaches to the cuneiform bone. A portion of the anterior border of the large cuneiform was felt to be devoid of covering and very rough. The animal was in standing posture. The affected limb carried no weight whatever, but the most of the time was held a few inches off the floor and constantly moved backwards and forwards in a dangling manner. She took but very little food, presented an anxious countenance, accelerated breathing, and a tucked-up abdomen. Circulation was considerably disturbed, with some elevation of temperature. The owner would not listen to my advice but insisted on some sort of treatment. A dose of morphia sulphate was given, and later several doses of antifebrin were given at regular intervals. As to the wound treatment I knew of nothing effectual that I had ever employed, but having been impressed favorably with reports on the uses of the salt of silver in similar conditions, I concluded to use it here. Silver citrate in solution of 1–125 was injected into the opening liberally. The exterior of the wound, which had at this time bulged out and become three or four times as wide as it was originally, was well sterilized and dusted over with an antiseptic powder, over which was placed absorbent cotton and a bandage, the latter applied loosely, yet well enough to keep the cotton in place.

Slings were tried, but being objected to by the animal a sort of frame was built around it, having two upright posts 2½ feet apart immediately behind the animal; a cross-piece well wound with cloth was placed between same and about 3 feet or

more from floor. The patient very soon discovered the comfort obtainable from this, for on the second day it rested for hours with its haunches pressed against the beam, finding great support in the contrivance. The wound was dressed regularly every six hours as above described, thus requiring attention during the night. The synovial discharge became perceptibly less on the third and fourth days, and on the seventh day had entirely ceased. The symptoms disappeared gradually and the appetite became excellent. An abscess now formed on the inner aspect of the joint. This was lanced and yielded very quickly to the same treatment. The at first greatly tumefied joint had now become much reduced except around the lower region, where the swelling remained very hot and quite hard. The limb could not at this time carry much weight. The wound healed completely, leaving but a trifling scar. After considerable bathing for several days a blister was applied over both sides of the joint. This seemed to afford considerable relief, as the animal could now commence to use its leg more, and at this date, Feb. 4, 1902, after a second application of a counter-irritant, appears to be making a good recovery.

A COW CASE.*

By G. P. STATTER, V. S., M. D. V., Sioux City, Ia.

I was called at nine A. M. to see a Jersey cow, seven years old, heavy milker when fresh, due to calve in two weeks. At last calving she gave birth to twins. The services of a veterinarian were required to assist delivery, following which, according to the attendant's story, she suffered a mild attack of parturient apoplexy.

The history of the present attack was that she had not been out of the stable for two weeks and had been fed on straw and corn fodder. The night previous she had not seemed well, had refused her feed, was very uneasy, and kept paddling with her hind feet, but finally laid down and seemed easy. I found her down, and if I had not known that she had not calved I would have at once said that it was an attack of parturient apoplexy. She was lying with her head in the flank, and on straightening the neck and releasing it it would return as before; eyes were dull, the mouth open and saliva dripping from it; breathing

* Read before the 14th Annual Meeting of the Iowa State Veterinary Medical Association, Feb. 11 and 12, 1902.

suppressed, with occasional moaning; nothing had passed from the bowels or bladder since the previous day; there was almost complete coma and partial or complete paralysis of deglutition. I carefully gave a capsule containing half a dram of croton oil, which I could feel pass down, and administered stimulants in the same way. I emptied the bladder and rectum, had her braced up on the sternum and well clothed. I left mixture containing nux vomica and ammonium muriate, with instructions to turn over every 4 hours. Calling again at night I could see no change. Relieved bladder and found rectum empty, though the animal had passed nothing. The next morning the patient was still down, but had a free evacuation of the bowels, which was very fœtid. There were signs of returning consciousness to the extent that the cow was able to eat and drink a little. About noon she made an effort to get up, and with a little assistance did so. When I called that night I found her still standing and apparently well. She calved within three weeks without any more trouble.

From the history, symptoms and results of treatment what should have been the diagnosis? Ante-partum paralysis, parturient apoplexy, or results of improper treatment?

DISCUSSION.

Dr. Repp said that he was satisfied the case was one of parturient paralysis, although this disease is rare before parturition.

URETHRAL CALCULUS. *

By E. G. MARTEN, M. D. C., Schaller, Iowa.

On an October morning Mr. J. B. Harris brought to me a horse that he said could not urinate. On examination I found the bladder distended with urine and the urine dripping from the penis. On trying to pass the catheter I found it difficult, but finally succeeded. On taking out the catheter some small stones followed, but the big ones remained, and as I could not reach them with my forceps, I decided to operate. It being Sunday Mr. Harris wished me to wait until the next day. The following day I passed the catheter and withdrew the urine and then prepared for the operation. The horse was cast as for castration. The part was washed with castile soap and water and with a 1–20 solution of Pearson's creolin. The skin was

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then rendered tense by the thumb and finger of the left hand and an incision was made with the scalpel in the median line in the perineal region. Then with a large splinter forceps I extracted 25 calculi from the size of a large pea to the size of a large walnut. After washing thoroughly and putting three sutures into the incision in the urethra and one in the skin the animal was allowed to rise. The wound healed nicely and the animal made a complete recovery.

DISCUSSION.

Dr. S. H. Bauman said that on May 28, 1901, a roan mare, about 8 years old, was brought to his barn. The history as given by the owner was that she was unable to hold her urine and that he had owned her for a year or more, during which she worked well every day and was always in good flesh and easily kept. Her coat was always glossy, she had good life and ambition and looked to be in the best of health. Owner told me he had to wash her tail every day or so on account of disagreeable odor of urine. I proceeded to make an examination. I inserted my hand into the vagina and felt a tumor in the bladder as large as my two fists. I inserted a probe but could feel no calculus. I also inserted a pair of lithotomy forceps and probed with them. I then told the owner that all I could do was to cut down on the tumor and find what was encysted and that probably we could effect a cure or better the condition of the mare. With his consent I proceeded to do so. I used creolin solution and thoroughly cleansed the parts. I then took a short castrating knife with hooked blade and made an incision about 4 inches long, starting on a line just anterior to the meatus urinarius and inserted my hand through the opening. I cut down on the tumor and found the calculus encysted. I carefully dissected around the calculus and removed it as well as another smaller one which lay in the same sac. The growth around the calculus was about an inch to an inch and a half thick and resembled superfluous granulations as seen in an open wound. It was very vascular and the hæmorrhage was profuse. I had a loss of perhaps two quarts of blood during the removal. The calculus is almost 11 inches at its greatest circumference, 4 inches at its greatest diameter and weighs almost thirteen ounces. I now exhibit it to you. There are four or five more of the same nature in the bladder of this same mare, but I wanted the mare to live, so stopped with this one. In conclusion will say that I dressed the wound and let the mare stand for an hour.

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Her owner drove her home the same day, a distance of ten miles, where she has worked right along ever since. The only difference seen or benefit derived from the operation is that she is able to retain her urine a little longer than before. Probably by the time of our next meeting I will be able to give you more on this same subject, as I expect to operate again this spring.

ANOTHER CASE OF FELINE DIPHTHERIA.

By Roscoe R. Bell, D.V.S., Brooklyn, N. Y.

Supplementing the report of a case of this disease in a pet house cat, recorded in the Review for May, 1901, I present a copy of the bacteriological findings from a culture made from the throat of a large male cat, to which I was called to remove an imaginary bone which the animal was supposed to have attempted to swallow, and which had become lodged in the pharynx. This was on May 8, and when I examined the throat I found nothing in the nature of a foreign body, but suspecting the true nature of the trouble by the existence of a temperature of 105° F., and the presence of an intense laryngo-pharyngitis, I caused the animal to gag by pressure upon the throat, which resulted in the expulsion of a diphtheritic membrane. This I collected into a clean bottle, and drove around to the office of the Board of Health (a few blocks away), where I made the culture. This was forwarded to the Bacteriological Laboratory, and the next morning I received the following report:

Laboratory No. 1063.

Department of Health,
Division of Bacteriology,
New York, April 9, 1902.

Dr. Bell:

Dear Sir:—The examination of the culture made by inoculating the tube with the secretion from the throat of a cat from 46 Livingston Street on April 8 shows the presence of diphtheria bacilli.

Examined by H. Taylor Cronk, M.D.,
Assistant Bacteriologist.

The animal was isolated, but no treatment was prescribed, as it was very difficult to control the beast. He showed very marked improvement, however, the following day, and on April 15 he had apparently entirely recovered spontaneously. I should have stated that the first symptoms of ill-health were observed on the 4th.

I here emphasize the great danger to be feared through this source of contagion. If a child be seized with the disease, a physician is usually summoned and as soon as the diagnosis is confirmed measures are at once adopted to confine the disease to

the patient; but the idea is prevalent that the cat has nine lives and the veterinarian is only called, if at all, when the owner is convinced that only one remains. While the poor animal has been losing eight of his clutches upon existence it has had every opportunity to distribute Loeffler's bacilli to all susceptible subjects. If children are of the household the tender-hearted little playmates of the cat take it in their arms, stroke its hair and talk sympathetically to the sufferer, usually with their faces close to that of the cat. Or, in the absence of such human attention, all other felines in the neighborhood who may make nocturnal visits to the backyard have splendid opportunities to become infected, and thus a perfect epidemic of diphtheria may be started.

It, therefore, behooves the veterinarian, where suspicious symptoms are present, to make or have made a bacteriological investigation.

RUPTURED ŒSOPHAGUS.

By T. S. CHILDS, V. S., Saratoga Springs, N. Y.

May 20, 1901, I was called to see the trotting mare "Mabel Beck." On my arrival I found a very nice large bay mare, over 16 hands high, eight years old, with this history: Four or five weeks before she was taken with distemper; the owner had by bad advice employed an empiric until a few days before. Then she was sent to a veterinarian to have a very large bunch on her neck opened, which was done all right; but three days later food and water were noticed coming out of the opening. The mare had not eaten anything for several days before the abscess was opened, but since the opening of the abscess she had been eating well until now, and about all the food she took came out of the opening. On examination it was found that a partial rupture of the œsophagus had taken place, about three inches from the pharyngeal portion of the neck. The opening was laterally, downwards and backwards. The opening was about three inches long, taking in the wall, and floor and sides, leaving just enough roof to hold it together. In drinking water it would spurt out of the opening three or four feet. This mare had gone a mile in 2:12 and better, and had no mark, so she was considered very valuable by her owner, Mr. George Cravers, proprietor of the Imperial Hotel in Saratoga, and he wanted all done for her that could be, irrespective of expense. I suggested an operation, but he dissented, so I did not know what to do, but through the kindness of Dr. Williams, of Ithaca, and Dr.

Bell, of Brooklyn, N. Y., and a few others, I decided on a plan of treatment, which worked well. I had all hay and coarse food taken away from her and substituted sawdust for bedding, had her placed in a good clean box stall, gave her milk, eggs, and strained oat-meal—all that she would take for two weeks, aud used a $\frac{1}{500}$ solution of nitrate of silver for the external wound, and $\frac{1}{5000}$ per cent. of the same for the internal wound per mouth, four times a day. All went well for a few days, then she would not drink, but we did not let her have anything else. So she soon took to her oat-meal drink, and in three weeks she was well. The first solid food she had in all this time was the first day of the third week (a nice bunch of fresh green grass), which she took eagerly and all right; and, after one more week, we sent her out to grass, where she was left for one month, and at the end of that time she was sent to Island Park, near Albany, to her trainer, who ten days later said she was as good as new and faster than ever. I had almost forgotten to say that the opening was made much larger at first and all the old ragged edges and diseased tissue was dissected away, and the œsophagus (that is, what was left of it) brought as nearly into apposition as possible.

Credit is due to Dr. Bruce McKay, of Glens Falls, N. Y., who I had help me in the operation.

I hope this case will bring out a discussion that will be of a lasting benefit to all; as, only about one year before I had a case that was very similar, and I advised the animal's destruction, which was done, as the owner was willing, and, perhaps, had he been as persistent as our friend, "Mabel Beck's" owner, that the life of this animal might have been saved. This mare's destruction was advised; but the owner would not listen to it, and he saved his mare by his persistence.

A CURIOUS CASE OF TETANUS—TREATMENT WITH ANTI-TOXIN —RECOVERY.

By T. B. Rogers, D. V. S., Woodbury, N. J.

On February 12th, 1902, I was called to see a horse that had received a wound at the base of the ear five days previously. There was considerable swelling on the side of the face, with infiltration of pus, and entire inability to masticate food.

Suspecting the presence of a foreign body I enlarged the wound and made careful though unsuccessful search for it. I made counter openings for drainage and disinfected the affected region thoroughly.

Next day the conditions were the same and further unsuccessful search was made for the foreign body.

On the 15th I found a splinter of wood about as long and thick as the little finger near the site of the wound *and in a position where careful examination on the preceding day had failed to demonstrate it.* (It had evidently changed its position through some muscular movement.)

On the 17th the wounds were discharging freely and the jaws sufficiently relaxed to allow the patient to eat a little. I may add that I attributed the trouble with the function of mastication to the inflammatory condition in the region of the maxillary articulation. On the 18th a great storm blocked the roads and I was unable to see my patient until the 24th, when his owner came to see me with the statement that the horse was much worse.

I found a case of marked tetanus and at once re-opened and flushed out the wounds. In 48 hours I gave 100 cc. of tetanus antitoxin; this had the effect of rendering the condition stationary, but did not relax the muscles. Continued flushing out of the wound was continued.

After the tenth day of the acute manifestation the symptoms subsided so far as to allow the patient to eat a little grain. Now arose another group of symptoms. Instead of general muscular spasm, one or two muscles of a group were singled out, would remain in contraction for 24–48 hours, then relax and others contract in their stead, and finally the orbicularis oris passed into this condition, remaining so stiff for two days that while the patient could eat if the food was placed in his mouth he was utterly unable to pick it up. The medical treatment consisted in small doses of bromide of potassium, chloral and acetanilid.

The temperature never rose above 102° F. and the heart's action was good and steady throughout the attack.

On the 17th March the patient was dismissed to light work.

I have reported this case because I think it is an instructive one. The patient evidently had tetanus when first seen and the primary amelioration of the symptoms was due to the thorough opening up and disinfection of the wound, its closure permitted further elaboration of toxin and secondary poisoning.

The antitoxin stayed the effect of the toxæmia to a sufficient extent to allow the patient to live until he could elaborate some antitoxin for himself.

CANINE DISTEMPER.

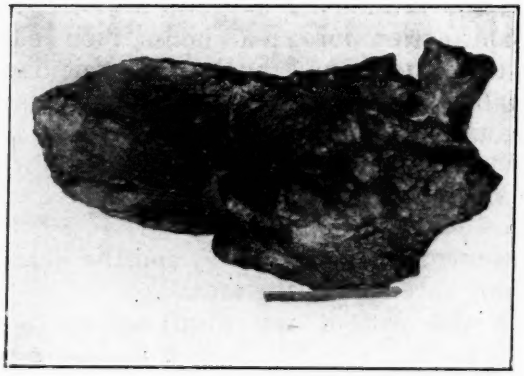
By T. S. CHILDS, V. S., Saratoga Springs, N. Y.

Miss W. bought a dog at the Dog Show of 1900 in New York City; it was a black cocker; she has a kennel of 40 dogs; this new dog had a disease, and all the dogs became affected more or less; about all dogs appeared to be well or about so, when one after another was taken with what appeared to be infectious pneumonia and about a dozen died or were destroyed, and post-mortem revealed pneumonia in every case. The lungs were black and very much engorged, looking much like the liver. All the dogs suffered terribly. I am stuck as to the cause, and as to infectious pneumonia in dogs, I would be glad to hear from parties having more experience than I on this subject if they can from this meagre description.

[There appears to be no doubt but that the dog purchased at the New York Show journeyed to Saratoga with the germs of a very virulent distemper in his system, and distributed them among his susceptible kennel mates.—EDITOR.]

A RECORD TUBERCULOUS LIVER OF THE OX.

Don C. Ayer, D. V. S., Chief of Meat Inspection, Bureau of Animal Industry, South Omaha, Neb., contributes the accompanying photo of a beef's liver, which was taken from a steer slaughtered at that station. He furnished the following macroscopical description of the specimen: The carcass was extensively affected with tuberculosis. The liver weighed one hundred and forty-seven (147) pounds, was three feet eight inches (3′8″) in length, two feet two inches (2′2″) in width, and twelve (12″) inches thick. The doctor remarks that in his long and extensive experience as a federal meat inspector nothing approaching the dimensions and weight given ever came under his observation.



CASTRATION OF A LION.

By A. M. LEEK, Senior Class N. Y.-A. V. C.

While engaged in conversation with the trainer of "Wallace the terrible, untamable lion," on Fourteenth Street, New York City, one evening last week, he informed me that he had had a lion castrated a few years ago. "He was a masturbator and that is the reason I had it done," continued the controller of beasts. "The operation was performed uptown, and the veterinary surgeon was an Englishman, I think. He did a good job. He wanted me to put a collar on the animal, which I did, and by passing under the collar a strong rope and taking several hitches around his jaws and paws, I fastened him right to the bars of the cage. The doctor then asked me to take another hitch around those paws, for additional safety, which I did. After the operation was over, the way that surgeon sweated was surprising to see, and that lion was wild; he sprang to the side of the cage and clutched the bars opposite to where the doctor was standing (who had got out of the cage safely and was mopping his brow), and myself and two helpers had to get out at once for there was'nt anybody who could stay in the cage with him."

"Didn't it make him more docile?" asked I (referring to the castration).

"No, it didn't seem to," he replied. "He was just as ugly. We put him in with some other lions and he got to fighting and had a hole bitten into his lower jaw through which one of his upper incisors projected (clear through). I had the veterinarian come once more. We secured him and the tooth was cut off, and I intended rounding off the corners (smoothing them) myself, but I had delayed too long, for as soon as the tooth was cut off Mr. Lion keeled over on his back, dead! Blood poisoning having previously set in, causing heart disease, I suppose."

"I LOOK forward with great pleasure for every number of the REVIEW."—(*C. G. Neumann, V. S., Princeton, Minn.*)

GETTING AROUND.—A learned society with headquarters in Stockholm, Sweden, has issued a pronunciamento to the effect that its researches have proved Prof. Koch altogether wrong in his contention that bovine tuberculosis cannot be transmitted to the human subject. As yet the experiments made have not been detailed to the public, but the edict referred to has had some weight with health boards in Europe.—(*Breeder's Gazette.*)

DEPARTMENT OF SURGERY.

By L. A. and E. Merillat,
Chicago Veterinary College, 2537-39 State Street, Chicago, Ill.

SURGICAL TREATMENT OF EXOMPHALOS (REDUCABLE). (*Umbilical Hernia, Omphalocele.*)

By Dr. C. O. Van Winkle.

Various appliances have been used in the treatment of umbilical hernia, each having its own particular advantage and disadvantage. I will describe a method that I have seen used with very satisfactory results.

I prefer it to the multiple suture, the clamp with the bolt and thumb screw, or the crossed skewers.

This method is especially applicable to the colt, calf and pig. In the equine specie it is advisable to operate on animals thus affected, at the age of from five months to two or three years, six months old being the preferred age.

If the umbilical opening should exceed three and one half inches in length, or the hernia is irreducable, radical herniotomy is advisable.

Preparation.—This consists of seeing to the general health of the patient, and that the bowels are loose.

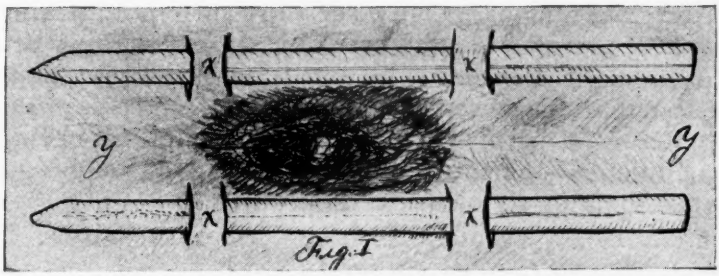
Restrict the rations for thirty hours previous to the operation. It is not best to entirely restrict the food, but supply good nutritious food in small quantities so that the animal may enter the operation in the best of condition.

Instruments.—Razor, scalpel, curved needle, strong suture with braided silk one yard long, two seasoned hickory skewers notched at one end, six to eight inches long (according to the size of hernia) and about 3/8 inch in diameter.

Technique.—Cast the patient, spread hind limbs, place and retain in the dorsal position (nicely done by placing two bags filled with oats on either side of the animal if sufficient help is not obtainable). Shave the skin around the seat of operation, wash with soap and water, disinfect with sublimate or creolin then a 50 per cent. solution of alcohol. The skin anterior and to the lateral margin of the sac is firmly grasped between the thumb and fingers of the left hand and raised and with the scalpel in the right hand two incisions are made by a sawing motion 3/4 of an inch apart, horizontal to the linea alba, and large enough to permit of the entrance of the sterilized, oiled skewers.

This is repeated at the opposite anterior margin, also at the posterior lateral margins of the hernial sac.

The skewers are then introduced under the ¾ inch of skin on each side of the hernia parallel to the linea alba; thus forming four live stitches from which the circulation is not shut off.



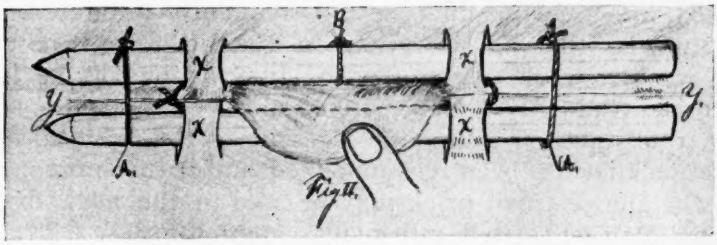
x.x x.x.—Incisions to admit skewers; y.y—linea alba.

A loop of strong suture cord is now placed and tightly tied over the notched ends of the skewers, and the other end is treated in a like manner, while an assistant draws up firmly on the hernial sac, after first having reduced the hernia.

After both ends are securely tied, a strong piece of silk is passed under the skewers in the centre at line B (Fig. 2) and back through the skin above and tightly tied at the side. This forms a stitch in the live tissue which helps to hold the skewers in place.

A suture is now passed along with and beneath the skewers under the live stitches (marked x) and tied at one of the ends.

The sharp ends are now cut off, as is also the hernial sac if it be a large one, otherwise it need not be interfered with. Some carbolized oil is poured around the edges of the sticks and the animal allowed to rise.



H. Hernia; A.A'--Ligature first applied; B--Second ligature applied around skewers; xxxx--¾ inches of skin under which the skewers are placed, also the ligature above same indicated by dotted lines ... ; y.y—Linea alba.

After-care.—Tie the animal in a good clean roomy stall provided with plenty of bedding. Keep on short rations until about 10 days after the skewers and hernial sac have sloughed off. Give gentle exercise daily.

Do not turn out with other animals too soon, as running or being chased might cause the new cicatricial tissue to give way.

After sloughing has taken place a dry antiseptic dressing may be applied, as it also may be used duringthe sloughing period.

Sequelæ.—1. Peritonitis by extension of inflammation

2. Septicæmia by septic infection.

3. Return of hernia by non-closure of umbilical opening.

4. Prolapse of omentum or intestine due to sloughing of the parts too soon, or "violent exertion."

SURGICAL ITEMS.

1. Warts touched up daily with glacial acetic acid will promptly disappear and leave but little scar.

2. Horses that have been idle for a protracted period should never be anæsthetized without first exercising, purging and dieting for several days. The lazy, old, fat horse must especially be anæsthetized cautiously, if at all.

3. In order to guard more carefully against sepsis the knife used to incise the skin should be laid aside and another used in the deeper parts of surgical wounds. The skin of the domestic animals is always dangerous no matter how much scrubbing and disinfection is applied to it. A knife, therefore, is certain to become infected in making the dermal incisions of veterinary operations. Other things being equal, this precaution will add materially to the primary unions in neurotomy.

4. It is well to remember that a spavined horse may sustain a nail prick between the date of diagnosis and the time set for treatment. The importance of re-examining a patient just before operation, no matter how carefully he may have been examined previously, cannot be too frequently reiterated. It is not unusual that an operation on a lame horse is postponed from week to week or from day to day or as long as he is able to work. Suddenly such a patient may become more acutely lame from another cause and be sent to the hospital for the operation that has been recommended, and if the surgeon is not "on the alert" a nail prick may be fired in the hock or a suppurated corn be treated with plantar neurotomy.—(*L. A. M.*)

EXTRACTS FROM EXCHANGES.

FRENCH REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

FISTULA OF THE NECK—OPERATION—RECOVERY [*P. Bergeon*].—A roan colt, of two years, became sick with pneumonia, sequela of distemper, of which he recovered, but after a while exhibited the symptoms of a parotid abscess. This was treated, punctured, and the animal lost sight of, when, six months later, the author was again called to see him. He then presented on the right side of the neck, two fistulous openings—one at the place where the abscess had been punctured, back of the parotid and above the union of the roots of the jugular, the other lower town, towards the lower quarter of the neck, forward on the neck, and from which escaped a creamy pus. The two openings communicated by a fistulous tract which crossed the direction of the jugular, and passed underneath it. An injection of fluid colored with permanganate of potassium showed the communication between the two openings, and a long S probe introduced through the lower opening came out at the superior, pushing out a large quantity of purulent matter. The treatment consisted in thorough disinfection of the parts and cautious excision of the fistula with the bistoury, guided by the groove of a probe, introduced into the track. The division was made for a length of 25 centimetres until the jugular was reached. In the remaining upper portion of the fistula a seton was introduced. Injections of permanganate of potassium, alternatively with a solution of sulphate of copper, were pushed through the track, while the lower wound was treated antisepcically with cresyl solutions. The horse was sold afterwards without having any blemish resulting from the operation.—(*Journ. de Zoötechnie.*)

TETANUS IN A DOG [*M. Ducourneau and P. Jayles*].—A fox terrier for the last two or three days has difficulty in taking his food, his ears are stiff and drawn towards the summit of the head, his face is wrinkled, the eyes veiled partly with the membrana nictitans, the labial commissures are drawn upwards and backwards, the head carried upwards, the neck stiff. The animal moves freely; his functions natural. It is at first a case of facial tetanus. Two days later the disease assumes another

aspect; it has become generalized. Movements are difficult, the legs move stiffly, the hind ones far apart; there are muscular contractions under the skin, the tail is rigid, there is ischuria, and no movements of the bowels. The treatment consisted in catheterizing of the bladder, rectal injections, injections of artificial serum (200 c. c.) and 5 c. c. of antitetanic serum, these were given for two days in succession and renewed three days after. Improvement began to show itself on the third day of the treatment, and the patient was discharged on the seventh. This observation is interesting, as, though recovery is generally the rule, it records the history of an important case in which the antitetanic serum used early in hypodermic injections may have had some influence on the result. Although more efficacious as a preventive, its curative propsrties are then certain or insufficient.—(*Review Veterin.*)

MULTIPLE SUBCUTANEOUS ABSCESSES IN A HEIFER [*M. Ch. Besnoit*].—This animal since several months has been under treatment for ulcerated and suppurating tumors of various regions of the body and was brought to the author about January 15. She is in bad condition, eats fairly and ruminates well. Her temperature is normal. She is very thin, with a skin dry, adhering to the tissues underneath; the coat is dull and staring, the back arched; in one word, the heifer looks miserable. All the internal organs seem to functionate normally. Her body is covered almost all over with tumors more or less soft and fluctuating in some places. In some, indeed, they are ulcerated on the loins and back; to the right and to the left there are about ten, spread between the external angle of the ilium and the last rib. On the left, one is as big as a child's head. It seems constituted by a dried caseous tissue. Under it there is a wide granulating surface. In front of that region there are other tumors, smaller, varying between the size of a nut and that of a man's wrist. On the right side there are five or six more. The head is not free from them. On the left side, at the anterior part of the cheek, there is one as big as an egg; it is fluctuating. On the inferior lip, one is as big as a nut. On the right side near the reflex border of the lower maxillary there is one. In the intermaxillary space, one like a man's wrist; at the base of the left ear, there are three. The legs are not free either. The right knee is affected, the antero-internal part of left fetlock also. The precrural lymphatic glands are the seat of the same trouble. After excluding the possibility of specific lesions, tuberculous, actynomycotic, botryomycotic, cancerous, etc., a di-

agnosis was made of abscesses, and the animal treated accordingly. Removal of the caseous crusts which covered some of the tumors, cresyl dressings or antiseptic and absorbing applications to the surface underneath, punctures of all the fluctuating tumors with antiseptics afterwards, and little by little the recovery progressed and was completed after a length of time which lasted up to the end of April, over three months.—(*Revue Veter.*)

MASSETERINE MYOSISIN COLTS ONE YEAR OLD [*M. J. N. Ries*].—This record is very interesting, notwithstanding its incompleteness, as it reveals a peculiar morbid entity which may have been observed by others. It is the history of four colts, between 10 and 13 months old, which all died within a few days of sickness and after presenting a similarity of symptoms very particular, if one take in consideration that the disease has appeared in four different stables, where only one of those animals was kept, on four different neighboring farms having but one point of community, viz.: the probable existence of an underground source of water supplying the drinking places. With the four colts the disease was "essentially characterized by an acute masseterine myositis, producing from the start trismus and almost absolute impossibility of taking or masticating solids and liquids, and followed later on by atrophy and contractions of the masseters. The disease has always ended fatally." The first colt was sick eight days and died the ninth. The second died in four days. The third had a complication of pneumonia by foreign bodies, which remained limited, from which the animal seemed to improve and ultimately died in 19 days. The fourth seemed to have resisted 48 hours.—(*Rec. de Med. Vet.*)

OSSIFIED ADENOMAS OF THE CÆCUM IN A HORSE [*N. G. Petit*].—A horse died from intestinal obstruction. Affected with colics without tympanitis, he suffered for four days, notwithstanding severe treatment. Aged 25 years, he had for the last two years been affected with colic on several occasions. At the post mortem most curious lesions were found, which have never been observed, either in man or animals. They consisted in conglomerated tumors, forming a mass as big as the wrist, divided on its surface as papillomas are and situated on the mucous membrane of the cross of the cæcum. In passing the finger over the vegetations of the growth, a sensation of roughness and hardness is felt, similar to that given when examining tissue affected with calcareous infiltration. The histological ex-

amination showed that this growth was constituted by ossified adenoma.—(*Bull. de la Soc. Cent.*)

A PERNICIOUS ACCESS IN A SLUT [*McBlot*].—Was it pernicious access of fever similar to those which attack man and are manifestations of paludism, or what? At any rate, the slut subject of this record had been at Combuncton for something like a year when one day she was found lying down, panting, sleepy, with the skin very hot. Her temperature was 39.8°C. She refused all kinds of food. It was not a case of isolation, as she never went out except very early in the morning or late after sundown. Paludean fever is diagnosed. 50 centigrams of quinine are given. The next day her temperature went up to 39.1° C. Same dose of quinine, which lowered it to 38.8° C. There was great prostration, inability to stand. The day after the thermometer registered 39.8° C., respiration 42, pulse 12.1. 80 centigrams of quinine were given. At 4 o'clock the temperature was up to 40.3°. The animal was taken with epileptic symptoms; she had convulsions, and struggled so that it took three men to control her. 50 centigrams of chlohydate of quinine were given subcutaneously, and she was wrapped in a cold sheet. After an hour the thermometer registered 38.1°. She was quiet. The cold sheet was removed, the animal rubbed dry and wrapped in a dry blanket. In the evening, another injection of quinine. Temperature went down to 37° C. After a good night's sleep, it still went lower to 36.8°, and the dog began to drink by herself. From that day recovery accentuated itself more and more, leaving, however, two complications, due probably to the enormous doses of quinine given. She was deaf and had amblyopia. She recovered rapidly of the first, but the second seemed rather rebellious in passing away. Unfortunately there had been no examination of the blood with the microscope and on that account the positive correctness of the diagnosis remains doubtful.—(*Rec. de Med. Vet.*)

CARDIAC HYPERTROPHY — RUPTURE OF THE POSTERIOR VENA CAVA—CYST OF THE OVARY [*M. Roger*].—This case is interesting by the variety of the lesions. An old mare, tied up with her halter, pulls back, makes a somersault, and falls heavily on the pavement. She tries to get up, but is unable to. When down the buccal mucous membrane is livid in color, the pulse filiform, the respiration stertorous. She soon enters into delirium, struggles violently; in twenty minutes she dies. At the post-mortem the right wing of the atlas is found to be fractured, the meninges and the brain are intact. On opening the

abdomen a large quantity of blood escapes, some 15 litres, and the abdominal organs are bloodless. Those organs present nothing particular. The right ovary has a large cyst; it weighs 750 grammes. The aorta has no aneurism, no solution of continuity. The walls of the posterior vena cava are exceedingly thin and its calibre depressed. At 10 centimetres from its origin the calibre is twice its normal size, its walls are highly colored red. In front of the dilatation, running towards the heart, there is an oval tear measuring 3 centimetres in length and 2 in diameter. This tear has its edges congested; they are anterior to death. The heart is considerably hypertrophied; there is hydropericarditis. Nothing in the lungs.—(*Revue Veterin.*)

BELGIAN REVIEW.

By Prof. A LIAUTARD, M. D. V. M.

FRACTURE OF THE POSTERIOR CANNON BONE IN A HORSE —RECOVERY [*Prof Navez*].—The prognosis of fractures of a hind leg varies according to circumstances, but most writers agree that in the majority of cases it is better to have the animal destroyed rather than to run the chances of a costly and always uncertain treatment. For those reasons records of such accidents are comparatively few, although they are rather frequent. The case recorded by the author shows that, after all, the prognosis is not always so very serious; that some complete fractures in the horse may recover rapidly, and that the use of leather splints is very advantageous. A horse cast in the stable was found very lame in one hind leg, with fracture of the metatarsal, a simple fracture, transversal outwards and beveled in its internal half. Treatment being required by the owner, the fracture was reduced, the leg enveloped in wadding and plaster of paris held in place with rollers and with three leather splints, half a centimeter thick, which had been softened by dipping in warm water. Rollers with plaster of paris were then laid over the whole, extending from the pastern to the upper part of the cannon. The horse was placed in slings. Six days after the animal rested on his broken leg; on the 10th day he stood firm on it; on the fifth week he took moderate exercise, scarcely limping on his lame leg. After fifteen days he resumed slow work.—(*Annales de Bruxelles, Jan., 1902.*)

VERTEBRAL ACTINOMYCOSIS IN A COW [*Mr. Poes*].—Nervous manifestations in the diagnosis of bovine tuberculosis have already been recorded. It is to show that such can also be present in lesiόns of a different nature that the author records the following case :—A three-year-old cow, in good condition, has become dull, her legs are stiff, and she moves unwillingly. After a while she becomes agitated, has spells of coughing, her general functions are about normal. She carries her head high, abnormally extended ; superior cervical muscles are hard ; lateral movements of the head, or those of flexion, are stiff ; prehension of food from the ground is difficult ; there are spasms of the extensor muscles of the head ; the front legs are stiff ; the hind ones act normally. Is it rheumatism, tetanus, or meningeal tuberculosis ? Treatment is prescribed, but no improvement follows. The animal is slaughtered. At the post-mortem the body of the sixth cervical vertebra is found pierced from its superior to its inferior face by a canal which is filled with a tumor. This by its internal extremity spreads on the floor of the rachidian canal, between it and the dura mater, extending to the two next vertebræ, and by the inferior extremity rests on the bone and the longus colli. The tumor is surrounded by a kind of fibrous membrane, greyish or blueish, soft here, harder there, and showing numerous very small yellow granulations, which under the microscope prove to be colonies of actinomyces.—(*Annales de Bruxelles, Feb. 1902.*)

SPRAIN OF THE SHOULDER IN BOVINES [*Mr. L. Henze*].—This affection is quite frequent, and, while it has been observed frequently as a complication of tuberculosis, it results also quite often from mechanical cause, as the author has observed it in districts where animals are turned in numbers to pasture. When an animal in heat is among them, various accidents are often met with, such as digestive troubles, reduction in lactation, cerebral congestion, and, above all, sprain of the shoulder, which is due to the struggles of a cow resisting another which tries to mount her. There is nothing peculiar in the symptomatology, and the prognosis is generally favorable. The essential condition of the treatment is rest, and this must be reinforced by the attendant. Good bedding, astringent or mildly irritating frictions are necessary. Subcutaneous injections of salted water will do in old cases. Improvement will not be noticed before three weeks, but radical recovery is obtained after a month.—(*Annales de Bruxelles.*)

FRACTURE OF THE HIND PASTERN IN A HEAVY DRAUGHT

HORSE [*Mr. J. Nizet*].—This is an eight-year-old mare, which in starting a load, slipped back on her right hind foot and became suddenly so lame that she had to be taken home. A simple transversal fracture of the first pastern complicated with slight wound of the coronet is the diagnosis. By request of the owner treatment is undertaken. Placed in slings, the animal had its leg, from the hoof to the middle of the cannon, wrapped up in the classical plaster dressing; the other leg is covered with astringent compresses to prevent laminitis; the slings are removed at night to allow the horse to lay down. For seven weeks the animal moved only on three legs, and after two months, when the bandage was removed, it was noticed that the pastern was surrounded with a swelling of fibrous consistency, which interfered with the action of the leg, and probably caused pain by pressure on the nerves of that region. Alterative applications being used, the swelling was reduced, but the lameness remained the same, viz., inability to carry weight while in motion or even when standing still. High plantar neurotomy was then resorted to on both sides of the diseased leg and two weeks later the mare was able to do light work. She recovered entirely with time and did even hard work.—(*Annales de Bruxelles, March, 1902.*)

GERMANY'S NEW MEAT LAW.—*Washington, March 31.*—"It is officially announced in the *Reichblatt* that Paragraph 21 of the new law regulating the inspection of cattle intended for slaughter and the inspection of meat will go in force on Oct. 1, 1902, says United States Consul Albert at Brunswick in a report to the State Department. In explanation of this paragraph he says: 'It provides that no substances or processes of any kind shall be applied to the preparation of meat intended for sale which shall make it injurious to health. The importation of such prepared meat from a foreign country is forbidden, and no traffic in it is permitted. The chemical substances which are considered deleterious are: Boracic acid and its salts, formaldehyde, alkali hydroxides or carbonates, sulphuric acid and its salts, as well as hyposulphites, fluor acid and its salts, salicylic acid and its combinations and chloric acid salts. These provisions of the law also apply to the use of coloring stuffs for meats and meat products. However, the yellow coloring of margarine and the colors applied to the coverings of sausages are excepted."

"I APPRECIATE all improvement and scientific advancement in the REVIEW."—(*J. R. Kelso, M. D. C., Hebron, Ill.*)

COLLEGE COMMENCEMENTS.

M'GILL UNIVERSITY. FACULTY OF COMPARATIVE MEDICINE.

The annual convocation for the conferring of degrees was held March 27 in the old library, with Dr. Craik in the chair, Sir William Macdonald representing the governors, and Principal Peterson was there as Vice-Chancellor. Dean McEachran read the report, and the prizes were presented as follows: Medal for best general examination during the three-year course, A. D. Harrington; prizes, veterinary medicine and surgery, A. R. Douglas; cattle pathology, A. D. Harrington; materia medica, A. D. Harrington; anatomy, T. C. Hays. Extra prizes for the best essay read before the veterinary medical association, (1) A. D. Harrington, (2) A. R. Douglas, (3) W. R. Blair; for the best essay read before the psychological society, (1) A. D. Harrington, (2) F. M. Gray.

The candidates for the degree of D. V. S. were then capped by Principal Peterson as Vice-Chancellor. They were: W. Reid Blair, G. A. Kennedy, W. H. Spear, Alexander R. Douglas, Seymour Hadwen, J. W. Symes, A. D. Harrington, W. Manchester (in absentia).

Dr. A. R. Douglas read the class valedictory, in which he dwelt on their gratitude for the zealous and conspicuously able instruction of the professors, and urged the difficulties, the responsibilities and importance of the veterinary calling.

Dr. McEachran wished the students God-speed, saying no school in the Dominion had turned out so many leading veterinarians as the McGill faculty, hampered in many ways as it is. He urged the great importance of the science. When individual horses are valued at $100,000, and cattle at $15,000, and dogs at $10,000, the need of trained veterinary doctors is apparent. In the United States there are $2,000,000,000 invested in stock and an annual loss of $20,000,000 from hog cholera alone. Moreover, the welfare of agriculture and the public food supply depends largely upon them. He went on to deal with the growing recognition of the science in the American colleges and pointed out the necessity of endowments for the carrying on of what is only one branch of the great science of medicine. The provincial legislature had at last recognized them by passing an act to regulate the right to assume the title and to practice.

Dr. Peterson expressed his sympathy with the work of the faculty, saying that at the University of Pennsylvania the effi-

ciency of the veterinary faculty is continually rising, and he was extremely pleased at the decision of Harvard to take up their work in comparative medicine again with some of the endowments lately given them for the study of medicine. He concluded with a few words of commendation of the work done by the students and professors.

Dr. Craik said it had been one of his first duties as dean of the faculty of medicine to assist in the incorporation of the veterinary school in the university. He would remind them that his own faculty had struggled along for years before reaching its present position of stability, and he believed their sun of prosperity would soon rise.

M'KILLIP VETERINARY COLLEGE.

A new era was inaugurated at the sixth annual commencement exercises of this college. The growth of the institution rendered it necessary to obtain a larger hall than in former years to accommodate the guests; in consequence the exercises were held at the auditorium of Y. M. C. A. building, Chicago, March 28th, at 7.30 P. M. The exercises were opened by the Rev. Pleasant Hunter, D.D., after which followed the conferring of the degree of the College (M. D. V.), by Dr. M. H. McKillip, upon the following gentlemen: C. P. Draper, A. H. Fehr, Robt. Frame, Chas. Frazier, T. P. Galbraith, H. L. Jackson, Geo. Jerome, John Keppel, C. A. Mack, S. H. Miller, C. W. Moore, M. W. Shempf, J. F. Sylvester, B. C. Tillman, Thomas Trinder, F. R. Whipple, T. T. Kendrew, J. P. Luxmore, H. A. Walker.

The address of the evening was deliverd by Dr. Jas. G. Kiernan, and prizes were awarded by the Secretary, Dr. John J. Millar, as follows: Highest average for three years, John Keppel (presented by McKillip Veterinary College); highest average for senior year, John Keppel (presented by faculty of McKillip Veterinary College); highest average for junior year, W. G. Langley (presented by faculty); highest average for freshman year, E. D. Andersen (presented by faculty); highest average in bacteriology, John Keppel (presented by Prof. I. D. Rawlings); highest average in anatomy (freshmen), A. Paul (presented by Prof. F. S. Schoenleber); highest average in materia medica, M. W. Schultz (presented by Prof. T. B. Newby).

Following the exercises about 150 persons adjourned to the banqueting hall, where a most elaborate *menu* was given in

honor of the class of 1902. Toastmaster Prof. E. M. Reading contributed greatly to the success of the evening's entertainment, while the responses were made by Dr. Howard L. Jackson for the graduating class, W. G. Langley of the senior class, and J. W. Eastland of the junior class. The different members of the faculty as they were respectively called upon by the toastmaster responded briefly, as also did Rev. Pleasant Hunter. A very regretable feature was the absence from the banqueting table of Dr. McKillip, who on account of his recent severe illness deemed it advisable not to remain after the graduating exercises.

It is needless to add that the final exercises of the class of 1902 mark an innovation in the history of the McKillip Veterinary College.

ONTARIO VETERINARY COLLEGE.

The closing exercises of this college were held March 28, and the following gentlemen received the degree of V. S.:

F. Rudolph Adams, Cardiff, Wales; Fred. W. Anderson, Buffalo, N. Y.; Henry M. Armour, Warsaw, N. Y.; Harry K. Berry, Paterson, N. J.; Thomas A. Blacklock, Campbellville; Christopher J. Bousfield, Toronto; Phineas Bridge, Paterson, N. J.; Walter T. Brophy, Montevideo, Minn.; Jared Burton, Wheaton, Minn.; Gilbert F. Candage, Bluehill, Me.; Joseph E. Carter, Riverhead, Long Island, N. Y.; Nels A. Christianson, Magnolia, Minn.; Matthew G. Connolly, Sundridge; Clarence J. Cooper, Warwick, Bermuda, W. I.; Thomas F. Colling, Toronto; James Morgan Dand, Deloraine, Man.; John B. Darling, South Peacham, Vt.; Charles E. Dille, Ville Ridge, Ill.; Charles H. Doyle, Summerside, P. E. I.; Lawrence L. Doyle, Summerside, P. E. I.; Bert C. Eldredge, Tedrow, O.; D. Alex. Fasken, Paris; Edward Roy Farewell, Drayton; W. Francis Forest, Hicksville, O.; Ralph Edward Freeman, Rockland, Me.; William A. Gill, Verschoyle; G. Arthur Gohn, Toronto; Charles L. Hayward, Georgetown, Ill.; Demerest T. Havens, Manasquan, N. J.; George A. Harvey, Cleveland, Ohio; Joseph S. Hollingsworth, La Salle, Ill.; Robert A. Hume, Watford; Gardiner Harvey, Guelph; Wesley I. Irwin, Little Britain; James W. Jackson, Ventnor; T. Fred. Johnston, St. John, N. B.; T. F. Kimball, Elmore, O.; John T. Leslie, Flora, Ind.; W. D. MacCormack, Enterprise; Jas. A. McLeish, Arkona; Edward J. Magee, Warrenburgh, N. Y.; Milton M. Marshall, Cochranton, Pa.; Walter L. Mills, Warsaw, N. Y.; John P.

Molloy, Rosser, Man.; H. Clifford Murray, South Glen Falls, N. Y.; William J. Neil, Omemee; R. C. M. Nyblett, Strathclair, Man.; Francis Vincent Perry, Regina, N. W. T.; Clarence Clement Petty, Hastings, Mich.; John Harland Pickering, Forest; Charles Edgar Poe, Leitersburg, Md.; Frank W. Powell, Akron, O.; Charles R. Query, Jackson, Mo.; Shearman Ransom, Westholm, B. C.; Herbert E. Rea, St. Mary's; W. E. E. Robbins, Halifax, N. S.; George L. Schneider, Canton, O.; Omar O. Selle, Cameron, Mo.; J. Clarence Singer, Perth Amboy, N. J.; Llewellyn Snyder, Huntsville; Chauncey C. Stevens, Yale, Mich.; A. Newton Stewart, Waterloo, Iowa; Clark A. Stewart, Waterloo, Ia.; Robert Stewart, St. John's, Nfld.; Theodore J. Stover, Norwich; John Henry Sturm, Chilton, Wis.; Lorne Daniel Swenerton, Carberry, Man.; William F. Schwiesow, Columbus, Wis.; Arthur R. Torrie, Chatsworth; R. Thomas Williams, Blackinton, Mass.; W. C. Van Allstyne, Red Creek, N. Y.

GRAND RAPIDS VETERINARY COLLEGE.

At the fifth annual commencement exercises, which took place in the college auditorium March 28, the following received diplomas: A. Beck, Auburn, Iowa; F. Brouwer, Holland, Mich.; E. Boesewetter, West Bend, Wis.; E. Branyan, Bronson, Mich.; H. J. Getman, Traverse City, Mich.; George Rainy Gaggin, Australia; C. E. Greenewalt, Topeka, Ind.; James F. Hanley, Boston, Mass.; W. A. Haynes, Jackson, Mich.; A. G. Hersey, Grand Rapids, Mich.; E. L. Krieger, Benton Harbor, Mich.; F. S. Kinison, Dawson, Pa.; W. G. V. Lyons, South Norwalk, Conn.; Elmer D. Nash, Helena, Montana; M. L. Pattison, Ridgeway, Mich.; Herman F. Sass, Toledo, Ohio; E. J. Sowerby, Rockford, Mich.; Fred L. Small, Beulah, Mich.; J. F. Sudman, Boyne City, Mich.; A. R. Trickel, Browntown, Wis.; Harry W. Wise, Rife, Pa.; Joseph Wardle, Flint, Mich.; W. W. Sammis, Indianapolis, Ind.

Dr. W. A. Mclean, of Greenville, took a post-graduate course; Dr. W. E. Bessey, of Grand Rapids, and Dr. J. E. Jaynes, of DeWitt, Mich., received the honorary degree of doctor of veterinary science.

The success of the college being now assured, the management are about to construct a more modern building for the accommodation of its patrons.

NEW JERSEY'S NEW LAW.

AN ACT TO REGULATE THE PRACTICE OF VETERINARY MEDICINE, SURGERY AND DENTISTRY IN THE STATE OF NEW JERSEY, TO LICENSE VETERINARIANS AND TO PUNISH PERSONS VIOLATING THE PROVISIONS THEREOF.

Be it enacted by the Senate and General Assembly of the State of New Jersey:

1. The governor shall appoint a board of examiners to be known as the state board of veterinary medical examiners, said board to consist of five members, who shall be persons of recognized professional ability and honor in the veterinary profession in this state and who shall have practiced veterinary medicine and surgery for at least five years immediately preceding such appointment; the term of office of the members of said board shall be three years, or until their successors are appointed and duly qualified; *provided, however*, that the members of the board first appointed shall serve as follows: One, for one year, two, for two years, and two for the full term of three years, commencing on the first Monday of May, one thousand nine hundred and two; and thereafter each member shall be appointed for the term of three years; each appointee shall, before assuming the duties of the office, and within thirty days after the receipt of his commission, take, subscribe and file, in the office of the secretary of state, the oath or affirmation of office; the governor shall fill vacancies from death or otherwise for unexpired terms, and may remove any member of said board for continued neglect of the duties required by this act, for incompetence, unprofessional or dishonorable conduct.

2. The first meeting of the examining board shall be held on the first Monday in May, one thousand nine hundred and two, suitable notice in the usual form being given with the notice of their appointment by the secretary of state, to each of the members thereof specifying the time and place of said first meeting; at the first meeting of the board an organization shall be effected by the election from their own membership, of a president, a secretary and a treasurer; it shall have a common seal, and its president shall be empowered to issue subpœnas and to administer oaths in taking testimony in any matter pertaining to the duties of said board; it shall make and adopt all necessary rules, regulations and by-laws not inconsistent with

the laws of this state or of the United States, whereby to perform the duties and to transact the business required under the provisions of this act.

3. Said board shall hold two or more meetings for examinations at the capitol building of this state each year, due notice of which shall be made public at such time as they shall determine; at all meetings a majority of the members of the board shall constitute a quorum, but the examination of applicants for license may be conducted by a committee of one or more members duly authorized by said board; said board shall examine all diplomas as to their genuineness, and each applicant for a license shall submit to a theoretical and practical examination, said examination to be written, oral, or both; such examination shall include the following subjects: Veterinary anatomy, physiology, chemistry, surgery, dentistry, practice of veterinary medicine, obstetrics, pathology, bacteriology, diagnosis, materia medica, therapeutics, pharmacy, zootechnics, sanitary medicine, hygiene, meat and milk inspection, and veterinary jurisprudence.

4. Said board shall issue forthwith to each applicant who has passed such examination successfully, and who shall have been adjudged duly qualified for the practice of veterinary medicine, surgery and dentistry, a license to practice the same in the state of New Jersey; such license issued pursuant to this act shall be subscribed by the president and secretary of the board of veterinary medical examiners; it also shall have affixed to it, by the person authorized to affix the same, its corporate seal; before said license shall be issued it shall be recorded in a book kept in the office which said board shall establish for the purpose of carrying out the provisions of this act, and the number of the book and the page therein containing said recorded copy shall be noted on the face of said license; such records shall be open to public inspection with proper restrictions as to their preservation.

5. Upon presenting to the board a certified copy of a court record, showing that a practitioner of veterinary medicine, surgery or dentistry has been convicted of a felony or misdemeanor, that fact may be noted upon the record of licenses, and the license and registration shall be marked canceled; any person whose license shall be so canceled shall be deemed as an unlicensed person, and, as such, subject to the penalties prescribed for other unlicensed persons who practice veterinary medicine, surgery or dentistry in this state.

6. From and after the first Monday in May, one thousand nine hundred and two, any person not hereinbefore registered to practice veterinary medicine, surgery and dentistry in this state, or desiring to enter upon such practice, shall deliver to the secretary of the veterinary medical board, upon a payment of a fee of ten dollars, a written application for license, together with satisfactory proof that the applicant is more than twenty-one years of age, is of good moral character, has obtained a competent school education and has received a diploma conferring the degree of veterinary medicine from some legally incorporated veterinary college or university of the United States, or a diploma or license conferring the full right to practice all the branches of veterinary science in some foreign country (which, in the opinion of said board, was in good standing at the time of issuing said diploma); applicants who shall have received their degree in veterinary medicine after the first Monday of May, one thousand nine hundred and two, must have pursued the study of veterinary medicine for at least three years including three regular courses of lectures of at least six months each in different years, in some legally incorporated veterinary college or university, prior to the granting of said diploma or foreign license, such proof shall be made, if required, upon affidavits; upon making the said payment and exhibiting the before-named proof, the examining board, if satisfied with the same, shall issue to such applicant an order for examination; in case of failure at such examination, the candidate, after the expiration of six months and within two years, shall have the privilege of a second examination by the board of veterinary medical examiners, without the payment of an additional fee; *and it is further provided*, that applicants examined and licensed by the state board of veterinary medical examiners of other states, on payment of a fee of ten dollars to the examining board of this state, and on filing in the office of said board a copy of said license, certified by the affidavit of the president or secretary of the board of such other state, showing also that the standard of the examination and other requirements adopted by that state board of veterinary medical examiners is substantially the same as that provided for by this act, shall without further examination, receive a license conferring upon the holder thereof all the rights and privileges provided by sections four and six of this act.

7. From and after the first Monday in May, one thousand nine hundred and two, no person shall enter upon or continue the practice of veterinary medicine, surgery or dentistry in any

of their branches in the state of New Jersey, unless he has complied with the provisions of this act, and shall have exhibited to the clerk of the county in which he desires to practice veterinary medicine, surgery or dentistry, a license duly granted to him as hereinbefore provided; whereupon he shall be entitled, upon the payment of one dollar, to be duly registered in the office of the clerk of the court of common pleas in said county; any person using any title or degree appertaining to the veterinary profession or practicing veterinary medicine, surgery or dentistry in any of their branches in this state after the first Monday in May, one thousand nine hundred and two, without being licensed and registered in conformity with the provisions of this act, or otherwise violating any of its provisions, shall be guilty of misdemeanor and, upon conviction thereof, shall be punished for the offense by a fine not less than one hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days, or by both fine and imprisonment, and for each subsequent offense the punishment shall be double that of the preceding one; and it shall be the duty of the respective district attorneys of the counties of this state to prosecute violations of the provisions of this act.

8. It shall also be lawful for the said board to institute civil proceedings in any court of competent jurisdiction against any person, company or association for the violation of any of the provisions of this act; such proceedings shall be brought in an action on contract and, upon conviction thereunder, the person, company or association so convicted shall be liable to a fine, which shall be the same amount fixed in preceding section of this act, and all fines and penalties collected by any court under the provisions of this section of this act shall be paid over to the treasurer of this board, to be received and disbursed by him in accordance with the provisions of this act.

9. Nothing in this act shall be construed to interfere with or punish veterinarians in the United States army, or in the United States bureau of animal industry, while so commissioned, or any lawfully qualified veterinarian residing in other states or countries meeting registered veterinarians of this state in consultation, or any veterinarian residing on the border of a neighboring state and duly authorized under the laws thereof to practice veterinary medicine or surgery therein whose practice extends into the limits of this state; *provided*, that such practitioner shall not open any office or appoint a place to meet patients or receive calls within the limits of New Jersey; and

nothing in this act shall be construed to prohibit the practice of veterinary medicine, surgery or dentistry, by any practitioner who shall have been registered in any county in this state before the first Monday in May, one thousand nine hundred and two, and one such registry shall be sufficient warrant to practice veterinary medicine, surgery or dentistry in any county in this state; nothing in this act shall apply to persons gratuitously treating animals in cases of emergency; *provided*, they do not represent themselves to be veterinarians or use any title or degree appertaining to the practice thereof.

10. The expenses of said board and of the examinations shall be paid from the license fees and fines above provided for, and if any surplus remain, the same may be distributed among the members of said board as a compensation for their services as members, but otherwise they shall receive no compensation whatever.

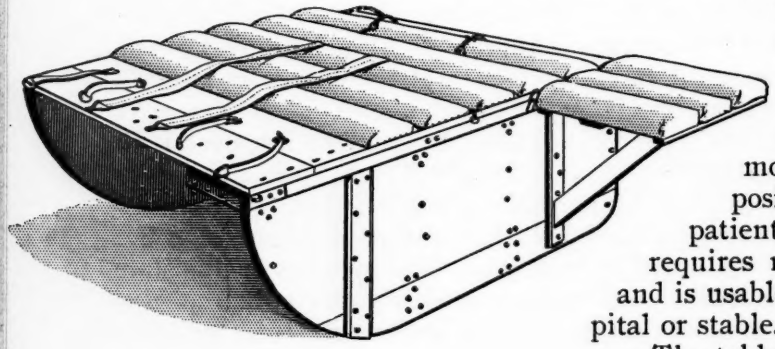
11. All acts or parts of acts, general or special, now existing not in accordance with the provisions of this act or inconsistent herewith be and the same are hereby repealed.

12. This act shall take effect immediately.

THE ROCKER OPERATING TABLE.

The operating table here illustrated has been in use now for more than a year at the Kansas City Veterinary College, and has proven so satisfactory in every way that we have obtained from Dr. Stewart a photo and description of it for the benefit of our readers.

This cut shows the table without the foot-board, which is removed when the animal is on the table. This table is easily moved into any position with the patient upon it. It requires no anchorage and is usable in any hospital or stable.



The table can be manufactured and placed on board cars in Kansas City complete in every detail for $75. Should any member of the profession desire to construct one at home, blue prints giving every item of construction, so that a competent mechanic can readily build it, can be furnished for $5.

CORRESPONDENCE.

THE BUYING OF AMERICAN HORSES BY THE BRITISH GOVERNMENT.

FORT SHERIDAN, ILL., April 10, 1902.

Editors American Veterinary Review:

DEAR SIRS:—The press of the country for several weeks past has been full of the abuse of the alleged blunders of the British remount department in their purchase of horses in this country for service in South Africa, how they were swindled by the contractors, high prices paid, and worst of all their refusal to accept the services of the U. S. Army "horse expert," who, it is presumed, kindly offered his services at so much per —.

As we know a good deal about the operations of some of the British boards doing business in the Northwest, we believe it is only fair to our English brethren to state a few facts in this connection.

In the first place, there is no such office as that of "horse expert" in the U. S. Army; the horses are mostly purchased here under contract by an officer of the Quartermaster's Department and in a few instances by cavalry regimental boards of one or two officers; in either case the inspecting officer or officers is accompanied by a regimental veterinarian or a civil veterinarian of the Quartermaster's Department, and we know that none of the gentlemen claim to be "horse sharps," and we are sure that the veterinarians do not claim to know any more about the soundness of an animal than their English brother. So much for the "horse expert."

While acting as a member of a horse board last spring and summer, receiving horses under contract for a cavalry regiment, we met on several occasions British horse boards operating in the same territory and receiving small sized horses for use in South Africa, while we were in the vicinity of Sheridan, Wyoming. About forty car loads of these horses were shipped south for transportation to Cape Colony. We were interested to a great extent in the *modus operandi* of the English board, as we expected to gain several points on examination and inspection; they also observed our method of receiving.

Their method of inspection and examination was practically the same as ours, each animal being first passed upon by the inspecting officer and then tested for soundness by the veterinarian; their inspection and examination was as rigid as our

own; all of the gentlemen we had the honor of meeting knew their business practically, and some of our own board were not reluctant to take advantage of several practical points from them.

Now, as to the price paid for the class of horses wanted, it would have been considered high two years ago, but so many of the horses had been purchased that the contract price had advanced considerably over the original; the prices ranged from sixty to eighty-four dollars; the demand was so great and the supply was exhausted to such an extent that the proprietors of the ranches had to go up into Idaho to obtain horses to do the usual horse work of their ranges.

After the departure of the English boards the supply of small horses in Nebraska, Dakota, Wyoming and Montana had been practically exhausted, while the kind of horses we were receiving still continued in abundance. Our horses for cavalry are generally fifteen hands three inches high, weigh about ten hundred and fifty pounds, cost from one hundred and ten to one hundred and twenty dollars each, and from what we could understand would be totally unfitted for South African service.

The surprising part of the whole thing to us is that the price of the wiry small horse of the western prairie remained so low when the demand was so great.

We do not believe that there is a single man in the U. S. Army, "horse expert" or "horse doctor," who could give pointers to any of the English boards we met with, in the inspection and examination of the horse, and the price was low considering the conditions.

As to their honesty, their uniform stands voucher for that. We believe it stands unsullied even though engaged in the trade of horse buying. Very respectfully,

GERALD E. GRIFFIN,
Veterinarian, Artillery Corps.

ENCEPHALITIS IN HORSES AND IMPACTION IN CATTLE.

COLUMBIA, TENN., April 2, 1902.

Editors American Veterinary Review:

DEAR SIRS:—We have lost a good many horses and mules this winter from encephalitis; also a good many cattle from impaction of the omasum.

I would be glad to hear from any one who has a treatment by which they can get good results. Yours truly,

A. O. KENNEDY.

SOCIETY MEETINGS.

OHIO STATE VETERINARY MEDICAL ASSOCIATION.

This association convened for its nineteenth annual session in Townshend Hall, Ohio State University, Columbus, on Jan. 14, 1902, with President Dr. S. D. Myers in the chair. Meeting called to order at 2 P. M., when Rev. W. O. Thompson, President of the University, was introduced and delivered to us a most cordial address of welcome, telling us of the trials and successes of the Veterinary Department of this university, as well as requesting all practicing veterinarians in the State to take a deep interest in the success of this especial department.

This *extempore* address was replied to by Dr. J. V. Newton as follows:

"*Mr. President, Prof. Thompson and Members of the Ohio Veterinary Medical Association:*

"GENTLEMEN:—It is my honor as well as my pleasure to have been chosen to respond to your cordial welcome just extended to us. While it may be a pleasure for your institution to entertain us, it is indeed a great pleasure for the State Veterinary Medical Association to be the guest of Ohio's greatest institution of learning, 'The Ohio State University.' Your invitation to meet here carries with it the conviction that the officers and faculty of your great institution places our organization and profession among the many agencies all working together as a harmonious whole, designed to bring American civilization to the front rank and to keep it there as the criterion, the emulation of which will be the aim of all the people of all clans who are working to lift humanity to its proper plane, which a poet of old told us is 'but one step below the angels.'

"Our organization is in favor of education; aye, more; it is in favor of higher education, and we hope to see the time when none but the alumni of regularly organized and fully equipped veterinary colleges will be allowed to practice veterinary medicine in this great State. A nation such as ours, which gets one-third of its food and a vast amount of its work from the animal kingdom, cannot fail to appreciate the valuable service of a profession whose equipment enables it to assist in keeping strong and sound the beast of burden and free from disease the animals raised for food.

"The members of the profession will no doubt pardon me if I for a moment dwell on the growth and progress of our profes-

sion during the last twenty years. About twenty years ago a few of us met in this city and organized the Ohio Veterinary Medical Association. Ohio was one of the first States to take this action. Most of us at that time were graduates of some foreign college. I am glad to say that to-day we have many good veterinary colleges in this country, and I am pleased to say that we have an excellent veterinary school in our own State, a part of the institution of which we are guests to-day.

"I doubt if there is a State in the Union to-day that is without a veterinary medical association. It is an undisputed fact that this veterinary association has done a great amount of good in our State.

"The veterinary associations and their members have done as much to prevent cruelty to animals as any other organization in existence. I call attention to work of our profession in assisting local societies for the prevention of cruelty to animals.

"'Worm in the tail' and 'hollow horn' and other misnomers are now a thing of the past among us, and animal ills are now treated from a scientific basis.

"I well remember a prominent veterinary surgeon of our State who about twenty-five years ago had a lucrative practice in one of our neighboring cities. Once, when he was called out of town, a young graduate was called in to see one of his patients. On his return he was telling one of his friends that a young graduate upstart had arrived in town, and 'I found him treating one of my patients, having a barometer in his rectum taking his temperament.' This man had a large practice, and I remember him having a case in court, and when the attorney asked him what his occupation was, he replied, 'A veteran surgeon.' 'Well, doctor,' said the attorney, 'what did you give the animal?' 'Some digitalis.' 'Doctor, what would be the effect of that drug on the animal?' 'It would be comforting to the mind, soothing to the bowels, a tonic and an anodyne.'

"I merely mention this to show what the profession was twenty-five years ago, and this is a fair example of the men who were caring for the live stock in our State at that time. I am sorry to say that there are some men practicing in our State today who are as ignorant of what they are doing for their patient as the party referred to. The facts are that a young man coming to this State twenty-five years ago, looking for a place to practice, the public looked upon him with a kind of suspicion, as the horse doctor of twenty-five years ago was looked upon as

a dead-beat and a man not to be trusted ; but to-day I am proud to say that the veterinary profession in the State of Ohio ranks on a par with any other of the professions.

"We are justly proud of our profession. Its calling is high, its aim is pure and its accomplishments make the world better for our being in it. The inventor may build his automobiles, patent his bicycles or construct horseless vehicles for business and pleasure, but the noble animal, the horse, and his distant relative, the tireless and persevering mule, are bound to remain man's best friend and constant companion.

"The chemist may compound his substitutes for milk, but the infant in arms and the old man in his tottering years, as well as the adult in health and strength, will always find nourishment and refreshment in the pure milk of the healthy cow.

"The vegetarian may exploit the advantages of a vegetable diet, but the human appetite, as found in the masses, will continue to crave for the steaks, chops and roasts that are to be secured from the hands of the butcher.

"So you see, my friends and members of the profession, we have many ways to ennoble our calling and my prayer is that every member of our profession will give to it his best work of both mind and heart, being conscious in so doing that the world will be better for his having lived."

Roll-call showed the following veterinarians present :—F. E. Anderson, Findley ; S. E. Bretz, Nevada ; J. H. Blattenburg, Lima ; O. V. Brumley, Columbus ; J. C. Burneson, Wooster ; E. R. Barnett, Akron ; L. W. Carl, Columbus ; W. R. Clark, Wauseon ; E. H. Callender, Zanesville ; G. W. Cliffe, Upper Sandusky ; W. E. Clemons, Granville ; P. A. Dillahunt, Springfield ; G. W. Emery, Greenfield ; H. Fulstow, Norwalk ; J. D. Fair, Berlin ; W. H. Gribble, Washington C.H. ; T. B. Hillock, Columbus ; W. C. Holden, Delphos ; R. G. Holland, Wellington ; R. C. Hill, West Alexandria ; W. R. Howe, Dayton ; C. E. Inskeep, Urbana ; J. E. Johnson, Piqua ; T. E. Jones, Newark ; T. W. Johnson, Sidney ; F. J. Kyle, Springfield ; C. E. Leist, Columbus ; S. D. Myers, Wilmington ; R. J. Michener, Lebanon ; J. V. Newton, Toledo ; J. W. Price, Lancaster ; E. L. Price, Circleville ; I. A. Ruby, Plymouth ; S. Sisson, Columbus ; F. F. Sheets, Van Wert ; Walter Shaw, Dayton; E. H. Shepard, Cleveland ; W. J. Torrence, Cleveland ; G. R. Teeple, Napoleon ; D. S. White, Columbus ; Jos. Wingerter, Akron ; I. A. Wynn, Kenton ; F. H. Davis, Chicago, Ill. ; W. E. Wight and N. Rectewald, of Pittsburg, Pa., as well as a large number of

senior veterinary students, and horsemen, members of the Ohio Horse Breeders' Association.

Minutes of the last annual session were read and approved.

PRESIDENT'S ADDRESS.

Dr. S. D. Myers, President, then delivered a short address, as follows:

"GENTLEMEN:—We are gathered here to-day from all parts of the great Buckeye State to celebrate the nineteenth anniversary of the Ohio State Veterinary Medical Association.

"We are not gathered here for scientific gain alone, but also to extend a hearty and friendly handclasp with those we have met at former meetings, and, perchance, meet others who have not had the pleasure of being with us before.

"State associations should receive the support of the veterinarians, as they have advantages over the national organizations; for instance, the national associations must of necessity be devoted more and more to sectional work. There are those who are engaged in sanitary work, including meat and milk inspection. Others are more interested in experiment-station work; and, last, but not least, comes the general practitioner. Each of these three classes must receive special attention. We, as a majority, are classed among the general practitioners, and are enabled in our State association to study conditions that exist in our own State, and that are, therefore, of interest to us all. Again, the State association meetings are usually centrally located, so that as far as distance is concerned, it is possible for all the members to be present, whereas the National Association's meeting place moves over such a vast scope of country that it is impracticable to attend all the sessions.

"During the past year quite a commotion has been created in veterinary and medical circles by the declaration of Prof. Koch at the London Congress, that *bovine tuberculosis* cannot be communicated to man. The veterinary and medical professions are protesting vigorously against Dr. Koch's theory. However, we should not overlook the weight of the noted authority's claims.

"We as veterinarians have many things for which to be thankful. We have had a prosperous year, considered from a commerclal standpoint. Business has been plenty during the past year and collections as a rule have been good. It may be of interest here to note the increase in our export of horses and mules, and it is gratifying to know that this increase has not been brought about by declining prices. The exports in 1892

were 5191; by 1895 the figures had reached 16,499; in 1896, 31,044 were exported; in 1897, 47,006; in 1898, 59,249; in 1899 we dropped back a little, to 52,553; in 1900, 108,091; and in 1901, 116,500 were exported.

"Another thing for which the veterinary profession has cause to be grateful is the number of new books which the veterinarian may add to his library. Some are new, others are recent translations, which are new to most of us.

"Again, during the past two years, we have not had to record the death of a member of this association; although the profession at large has lost by death a number of brilliant men, among these being Prof. William Williams, Dr. George Fleming, Dr. A. W. Clement, and Dr. R. S. Huidekoper.

"The keen interest in the clinics at the last meeting is heartily commended to your attention. They deserve all the encouragement that can be given to them. I think it proper that they be given an important place on the programme of our meeting. They will act especially as a stimulus toward bringing out the younger members of the profession.

"We are sorry to say that during our term of office the President and Secretary have been very much handicapped by a great many of the members not answering correspondence. The President and Secretary may have a certain object in view, and in order to accomplish that object, they may have to write several members. If one of those members fails to reply, the object aimed at may be lost. This is a serious detriment to the best interest of the association, and it is hoped that some attempt at advancement will be made along this line.

"We find by referring to our constitution that one of the objects of this association shall be the devising of ways and means by which we may procure the establishment of State laws for the protection of the qualified practitioner. We have no desire to discuss this subject, but if the matter should come up for consideration we would advise, instead of a general discussion by members and non-members as heretofore, that a committee of three or five be appointed to take charge of the matter and report to the association.

"We sincerely hope that this meeting will be a successful one. We have been especially fortunate in our surroundings; a better place to hold our meetings, and especially our clinics, would be hard to find.

"In conclusion, we wish to say a word in regard to the programme. The Secretary and myself have labored diligently to

prepare the programme, and we hope it will be of interest to you all. We have papers and clinics, which with the discussions, will consume most of our time.

"We would suggest that in order to make things run smoothly, that each one of you, and especially those who are to take part in the programme, make a special effort to be present at the time specified for the opening of the sessions."

SECRETARY'S REPORT.

Secretary W. H. Gribble offered the following as his annual report:

"MR. PRESIDENT—GENTLEMEN: It may be out of place in a report from the Secretary of such an association as this, to have anything to say except as to the work and finances of the association; if that be true we owe you an apology for presuming upon your time and patience, for we confess in advance to having offered suggestions on matters we think of interest to the veterinary profession of this State, as well as to call your attention to some other affairs of special importance bearing directly upon this association itself. I presume first of all that it devolves upon me to explain why we had no semi-annual session in 1901. Your President and Secretary commenced early writing to members enlisting their assistance for the success of the summer meeting. The answers we received were somewhat like hen's teeth, few and far between, until your president becoming considerably discouraged suggested to us that if the attendance to the session was likely to be on a par with our correspondence we had better not have any meeting. We were of the same opinion, so took the liberty of writing to each and every officer in reference to the matter asking for a quick reply. The replies received were unanimous in the belief that a semi-annual session would not be a success as so many were intending to attend the meeting of the American Veterinary Association at Atlantic City, and could not well attend both. This, then, is the reason for no meeting. At once we began again, asking for volunteers to prepare for the present session, but somehow it seemed impossible to arouse any enthusiasm; other secretaries of associations tell us their members proffer their services and name their subjects, but Ohio veterinarians seem to be lacking in personal confidence; we all know it is not lack of ability; Ohio never lacks that in anything, but nevertheless, one writes, 'I am not sure I shall be able to be with you, and it would be foolish to prepare it and then not be present,' but I see him here in the room. Another, 'I think

you should ask the older members as I would rather listen than talk, and besides it is not pleasant to be criticised by those longer in the profession than yourself.' Another: 'Oh, I never' could put my ideas on paper, so please excuse me this time; still another says: 'Doctor, anything I could prepare would be so commonplace that if anyone else would write it I should feel like laughing at them, hence expect the same feelings towards myself.'

"Early in December I sent one hundred postals supplemented with about forty letters, one or more into every county in the State, asking for the names and addresses of the graduate veterinarians in that particular county. These were sent whenever possible to a member of this association; if none resided in the county then to some known veterinarian, and as a last resort to the postmaster asking him to deliver it to the principal veterinary surgeon of that city. Our object was to get the names and addresses of all veterinary graduates possible, so as to mail them a personal invitation to this meeting. From the one hundred and forty communications, less than twenty-five answers were received; now- think of the encouragement, twenty-four replies from one hundred and forty letters and less than half of this twenty-four were from members of this association, most of them were from graduates and non-graduates that we had never heard of, and from postmasters who said they knew of no graduate in their county.

"In spite of these discouragements we succeeded in getting together about two hundred names and had we only heard from all our own members who were written to, the number would undoubtedly have been above four hundred, as the cities of Akron, Cleveland and Toledo alone furnished the names of thirty graduates. As the time of the meeting drew nigh more interest was manifested and a very creditable program prepared, which we sincerely hope will be fully carried out with, if possible, some additions. Your secretary believes that the putting off of semi-annual meetings is not a wise plan; that meeting has always been a migratory one, bringing us into new localities amongst different laborers whose interest was thus awakened in the profession; while the annual meeting being by our by-laws set for Columbus only, makes any labor connected with the success of that meeting to devolve always upon the same set of men; if we are to have but one meeting a year let us so amend the by-laws that the annual meeting may be held in whatever city a majority of the members at a previous

meeting see fit to name, and by so doing secure a more equal division of labor and possibly a more general attendance. While personally opposed to this change, I would ask you to consider it, seeing that now for two years our semi-annual meeting has been for seeming good reasons revoked. Again we would ask that your next secretary be honored with replies to his correspondence, if it be only a postal card, so that he may know that all his mail is not lost in transit, besides a reply even in the negative is better than no reply at all. We would also call your attention to the non-payment of dues, and what should your secretary do, in his efforts to collect them; ought he to write each delinquent asking for the several amounts due; and if not paid, mark them on the books as suspended; if this is the correct way, then the secretary should be ordered so to do, so as to avoid remarks as to his presumption of authority.

"We note with regret that some of our members are in the so-called patent medicine business, without first withdrawing their membership.

"One uses the pronoun I, about fifty times in his little pamphlet, in which he tells his readers of the amount of patience and study it took to discover his remarkable mixture, and winds up with the remark 'that we desire to impress our patrons that we understand our business.' We have another in which in italics it proudly says, 'we know our business.'

"One advertises a liniment, guaranteed to cure any case of lameness that has not assumed a chronic state; it is chemically correct and bids fair to supersede all other liniments on the market; (it surely ought to) seeing that it is such a strong antiseptic that it immediately destroys all germs and is valuable in the treatment of all wounds, as well as corns, bunions, ear ache, tooth ache, sore throat, rheumatism, frozen feet, etc. A blister is advertised guaranteed to cure any curable case of lameness; it is the twentieth century blister par excellence and is truly a wonder worker. A colic cure is guaranteed to cure any case of colic; made up of five ingredients, whose happy combination (according to the ad.) seems to be a stimulant, sedative, astringent, laxative. 'And for the purpose of further aiding in the relief of sick animals' (no other reason, of course) one has established a free information bureau. One would think that the time for such laudatory gush was past; or are Barnum's words still true, 'the American people love to be humbugged.' We are also informed of another who is embarking in the same sort of enterprise, with his colic cure, blister, and condition powders;

but we have not been honored with any of his literature, and, moreover, are told that he intends to ask for a withdrawal from membership at this session. Is there any explanation for these actions? do these graduates have no love for their profession from a professional standpoint, or is it for the easy earned dollar alone? and what makes it doubly peculiar is that two of these men are old and honored members of the profession, and have been members of this association ever since its organization in 1883.

"Several veterinarians in Ohio have started into this business during our residence in the State, but we know of but one who has apparently made it a monetary success, and that is with a so-called stock food; while we know of several who have lost many hard-earned dollars before they settled back again into regular practice; but there must be a fascination about it, in which each new-comer imagines himself much smarter than the fellow that just failed; but, gentlemen, for one Gombault's Caustic Balsam there'll be fifty Elixirs of Life. The spirit of chance-it-once seems to pervade all channels of business; it seems a pity, in fact excites one's sorrow, to think that men will educate themselves in an honorable profession, in fact graduate from well known and honored colleges, only to become the advertisers of a pet compound perhaps of some value; or a fool mixture of no value whatever, when the equal of either could have been found without spending one minute inside the walls of any scientific school. These members have all violated Sec. V., Code of Ethics. There is some rumor of additional veterinary legislation during the present session of the legislature having especial reference to tuberculosis; but I do not believe the time to be ripe for a proper consideration of that subject by our law-makers; politics is in the saddle too strong for duty or even business to be justly and honestly attended to, and we had better let the matter rest, if possible, unless we were sure in advance that it could be bettered. Under the present law, as I understand it, no cattle are tested by the State unless request is made by the owners. This of itself bars that class of cows we most desire to reach, for the average dairyman is well versed in the common symptoms of the disease through the medium of the dairy and stock journals, and if he has heard one cow cough that settles him from making any request; so that practically only herds belonging to the State and county institutions, and such others as their owners have not the remotest suspicion of the disease being among

them, are tested, this latter class using the fact of the test as an advertisement. Be that as it may, the present law may be better (which is doubtful) than no law at all; but ofttimes, in amending laws, the opposite is produced from that which was anticipated.

"We would advise the appointment of a committee whose special duty it would be to try and secure lower railroad rates for our annual meeting. Political gatherings seem to have no trouble in securing reduced rates to Columbus, but agriculturists and their kindred associations are seemingly barred or unable to get within the charmed circle. Of course we were offered the one and one-third rate on the certificate plan, but with that we must guarantee one hundred tickets besides paying for a special agent. Take this week as an example. On the 12th and 13th tickets are sold at half fare (governor's inauguration). The United Mine Workers of America meet, commencing to-day, on the one and one-third certificate plan, tickets to be signed the 16th, and may on deposit be extended, good for several days. Then the State Boards of Health Convention, the Ohio Jersey Cattle Club, the State Horse Breeders' Association, the State Farmers' Institute, and the Ohio Agricultural Association, as well as ourselves, all meet between Monday and Thursday of the present week in this city, with none of the latter granted any concessions.

"No railroad but knows that more than one hundred will be present at these associations, and taking the fact of half fare Monday and the one and one-third fare of the mine workers it would have produced no hardship to them to have extended that rate three days more; besides being an advantage to the city of Columbus and a greater attendance at the meetings. If we have a special committee and these associations all meet next year during the same week as they have for years, would it not be easy by concerted action to obtain half rates; or at least one and one-third rates, by uniting and all leaving our tickets at some central location? We believe if all these associations by united demand cannot influence Columbus to obtain for them cheap railroad rates, their meeting in Dayton or some other central city would soon bring about this desired result.

"In conclusion, we are well pleased to see so many present, as up to a short time ago we were not very sanguine of a successful session, but its success well repays the officers and committees for the labor it has taken to bring this about. The literary program is full and the clinical material on hand is such as to

enable us to demonstrate every operation outlined on program, as well as several others. Twelve applications for membership received, $100 collected; while the expenses of the year were but $40, leaving us a net balance in the treasury of $342.

"I thank you for the kindnesses shown us during the past year, which have been many, in spite of our fault finding; and hope you will accept these remarks simply as suggestions and act upon them as you see fit."

ELECTION OF OFFICERS.

Next order of business was the nomination and election of officers to serve for the coming year. Drs. Anderson, Hill and White were nominated for President, Dr. Carl First Vice-President, Dr. G. Cliffe Second Vice-President and Dr. Newton Third Vice-President; Dr. Hillock Treasurer, and Dr. Gribble Secretary.

The ballot for President resulted in the selection of Dr. Anderson.

There being but one nominee for each of the other offices, the rules were suspended and the Secretary instructed to cast the ballot of the association for their election.

The chair then declared the following to be officers-elect for the year 1902:

President—F. E. Anderson, Findley.
First Vice-President—L. W. Carl, Columbus.
Second " " G. W. Cliffe, Upper Sandusky.
Third " " J. V. Newton, Toledo.
Treasurer—T. B. Hillock, Columbus.
Secretary—Wm. H. Gribble, Washington C. H.

Quite an amount of correspondence was read, little of which called for the attention of the association. One, a letter from Dr. Cotton, regretting his inability to be present on account of a case in court; another a request from Dr. W. F. Derr, asking to withdraw from the association as he was engaging in the proprietary medicine business, regretting the necessity, as he had been a member since our organization twenty years ago. Another contained advertising matter, with name of advertisers suppressed; but which the writer vouched was the advertising material of two of our members. It was of a self-laudatory character and the medicines the quintessence of wonderland. The writer agreed to furnish these advertisements with names of the doctors attached. The business of Dr. Derr being contrary to our code of ethics, his request was granted. The Secretary was instructed to obtain the names of members engaged

in the same business and write them, offering the privilege of withdrawal from membership; or to appear at our next session, and show cause as to why they should not be expelled.

PAPERS PRESENTED.

The first paper on the programme was read by Dr. Anderson, "A Skin Disease." *

This paper was but little debated, as none but the writer seemed to have had any such experience. The next paper, "Pneumonia and its Treatment" * was read by Dr. J. D. Fair. This essay was debated at great length, so much so that the chair was compelled to call a halt. The debate showed the greatest extremes of treatment from simple nursing and good air with no medicine, to enormous doses of different stimulating or debilitating drugs, and what surprised some, was that bleeding was in vogue by more than one. A short-hand report of this debate would have been well worth the expense.

The meeting now adjourned to meet at 7.30 P. M.

Evening Session.—The members gathered together at the time agreed upon, but there was no President willing to call the meeting to order, owing to a different construction being put to the meaning of Art. IV., Sec. I.—"They shall assume the rôle of their respective offices, with the close of the labor of the session at which they were elected"; one claiming the session closed with adjournment for supper; the other, that *session* meant the whole series of meetings held under one call (this latter was the true intention of the section).

We compromised by calling the retiring Vice-President to the chair.

Dr. Blattenburg called the meeting to order at 8 P. M.

Dr. Michener read the report of a very interesting case. * Considerable discussion as to the probable cause.

"Ohio Combatting Tuberculosis" was the title of a paper by Dr. J. C. Burneson. * This was well discussed, as all such matters are at present, the discussion leading to the recent statements of Prof. Koch, and their rebuttal by others, as well as to the legislation controlling the disease in this State, of which practically there is none.

Dr. H. Fulstow (on the programme for the operation of ovariotomy of the mare) now read a paper reporting his cases and describing the operation of vaginal ovariotomy.* Several questions were asked, but the discussion was deferred until during the operation, on to-morrow.

* Will be published in an early issue of the REVIEW.

Dr. Howe now took the floor and delivered excellent eulogies to the memories of Dr. A. W. Clement and Dr. Rush S. Huidekoper, after which a resolution was adopted appointing a committee of three to draft suitable resolutions of respect upon the loss of both. W. R. Howe, L. W. Carl, W. J. Torrence, committee.

The chair appointed Drs. Hill, Dillahunt and Cliffe a committee to audit the books of the Secretary and Treasurer; after which we adjourned to meet at 8 A. M. at the Veterinary Hospital prepared for work at the clinics.

THE SURGICAL CLINIC.

Jan. 15, 1902.—Met at the Veterinary Hospital at 8 A. M. with plenty of clinical material and no lagging of operators, each and every one being on time ready and willing to operate, and while operating described in detail each step of the operation and answered any questions asked of them; so that the clinics were really a pleasure as well as instructive.

Two bitches were spayed by Drs. Anderson and Cliffe.

Dr. Torrence performed plantar neurotomy on both front limbs of a gentleman's driving horse.

Dr. Myers explained his throwing harness and demonstrated the ease with which he could throw and conveniently confine the animal; he also demonstrated his method of operating and firing an old quarter-crack, the firing being deep and in the form of a half circle, with the convexity downward.

Dr. Shaw operated on an old roarer under complete anæsthesia, all taking a peep at the exposed vocal organs.

Stringhalt was explained, as well as the operation for its relief; and the operation of peroneal tenotomy, performed by Dr. Blattenburg.

Dr. Hillock performed cunean tenotomy, an easy operation on a clean hock, but we have found it more than once to be quite difficult when a bony spavin was present, and we believe the operation to be of little value unless anchylosis has taken place and the lameness is due to friction on the cunean tendon.

Operations of minor importance were either explained or performed by other members; but the main interest seemed to be centred on vaginal ovariotomy on the mare by Dr. Fulstow. The mare was given chloral hydrate; confined only with twitch and foot hobbles, and standing at one end of a large operating room, a rope stretched across the room back of the mare with no one inside the ring but the operator and twitch-holder, making an ideal position for all to see (what little of the oper-

ation can be seen) the different steps of the operation, which the operator freely explained as he went along, and also invited each that so desired to pass his arm into the vagina and find the incision.

At the close of the clinics the unanimous applause showed that they had been a complete success, which, in itself, repaid the committee and officers for their time and trouble and many were the expressions "let us have more of them."

One peculiarity of the clinics was the different strengths and weights of throwing apparatuses; one was used that we doubt weighed to exceed one or one and one-half pounds and could be carried in the coat pocket; another that weighed not less than twenty-five pounds with ¾-inch rope and double stitched leather. The former was considered unsafe, but their owner vouched for their strength, applied them himself on the mare and they proved sufficient.

Session now reconvened, with Dr. Blattenburg in the chair.

Dr. E. R. Barnett, of Akron, applied for reinstatement, and same was granted.

NEW MEMBERS.

New members proposed were:

Prof. S. Sisson, Columbus (O. V. C. 1891); vouchers, Walter Shaw and Sidney Myers.

J. C. Burneson, Wooster (O. V. C. 1891); vouchers, L. W. Carl and Walter Shaw.

F. J. Kyle, Springfield (O. V. C. 1891); vouchers, Walter Shaw and L. W. Carl.

W. E. Clemons, Granville (O. V. C. 1890); vouchers, L. W. Carl and T. B. Hillock.

H. J. Carpenter, Lima (O. V. C.); vouchers, J. H. Blattenburg and W. H. Gribble.

E. H. Callender, Zanesville (O. V. C. 1891); vouchers, L. W. Carl and W. H. Gribble.

F. F. Sheets, Van Wert (O. V. C. 1891); vouchers, J. H. Blattenburg and G. R. Teeple.

I. A. Wynn, Kenton (O. V. C. 1895); vouchers, L. W. Carl and Wm. R. Howe.

Jos. Wingester, Akron (O. V. C. 1895); vouchers, Walter Shaw and E. R. Barnett.

W. R. Clark, Wauseon (O. V. C. 1898); vouchers, G. R. Teeple and J. H. Blattenburg.

J. E. Johnson, Piqua (O. V. C. 1896); vouchers, R. C. Hill and S. Sisson.

C. E. Inskeep, Urbana (O. V. C. 1895); vouchers, R. C. Hill and S. Sisson.

The full list was read by the Secretary and no objection being offered, the rules were suspended and the candidates elected to membership. All being present except Dr. Carpenter, each in turn offered a few appropriate remarks. The special committee appointed to draft suitable resolutions on the deaths of Drs. Huidekoper and Clements offered the following:

"WHEREAS, We learn with regret of the recent death of DR. ALBERT W. CLEMENT, of Baltimore, Maryland, a fellow practitioner, who by reason of the successful manner in which he has practiced in his chosen profession for so many years, has established himself in our memories, and whom we wish to venerate as a man and as a fellow practitioner, and

"WHEREAS, It has pleased the Omnipotent God to take from our profession such a noble, earnest, and valuable member, and

"WHEREAS, The Ohio State Veterinary Medical Association deeply deplores the loss of such a highly educated man, yet we feel that it is our duty to submit to the manifestations of wisdom of the Almighty God, and we therefore

"*Resolve*, That the sincere sympathy of this Association be extended to his bereaved widow and family, and

"*Resolve*, That a copy of these resolutions be sent to his widow, that a copy be spread on the books of this Association and that copies be sent to veterinary journals for publication.

"WM. R. HOWE,
"L. W. CARL,
"W. J. TORRENCE. } *Committee.*"

"The Ohio State Veterinary Medical Association feels, in common with all veterinarians throughout the United States, a desire to pay its tribute of respect to the memory of the late DR. RUSH SHIPPEN HUIDEKOPER, who was not only a leader in thought, but also a foremost leader in action for the cause of the science to which he had turned out of pure love of the brute creation, and out of a sincere desire to alleviate the sufferings of the dumb friends of man.

"To such a supremely elevated character, adorned as he was with all that the advanced thought and skill of scientific research and expert knowledge could confer, both as regards the general practice of medicine and surgery and the equally beneficent practice of animal pathology, mere words fail to convey a full appreciation of the measured thought of his value to the

world, to the profession and to his family, and especially to us as an organization working to dignify and elevate the profession which he so richly endowed by means of his vast knowledge and his sturdy activities.

"Had Dr. Huidekoper done nothing more than what he accomplished in his splendid struggle for Congressional recognition of the veterinary profession in its relation to the military arm of the government, veterinarians everywhere would owe him a debt of grateful remembrance which no language could express; but he did far more than that, as we of the inner circle can testify; and therefore it is that we thus make known our desire to place upon the records of this association this permanent tribute to his memory, and to

"*Resolve*, That in the death of Dr. Huidekoper the veterinarians of America have lost a noble champion of their cause both in military and civil life, and the profession will feel keenly the loss of one of its greatest exponents and practitioners; and it is further

"*Resolved*, That a copy of this memorial be spread on the minutes of this association, and also that copies be sent to the veterinary journals for publication.

"WM. R. HOWE,
"L. W. CARL,
"W. J. TORRENCE. } *Committee.*"

The special committee appointed to audit the books of the association offered the following report, which was duly accepted:

"We, the undersigned committee, appointed to audit the books of this association, find the accounts correct and a balance in the hands of the Treasurer of $342.29, including all receipts and expenditures to date.

"R. C. HILL,
"P. A. DILLAHUNT,
"G. W. CLIFFE,
"*Committee.*"

STANDING COMMITTEES.

President F. E. Anderson appointed the following standing committees:

Contagious Diseases.—Sidney D. Myers, J. C. Burneson, E. H. Shepard.

Veterinary Progress.—David S. White, G. W. Cliffe, Walter Shaw.

In selecting a meeting place for the semi-annual session,

Toledo, Ohio, was the choice ; the exact date to be determined by Dr. Newton and the Secretary.

The following resolution was offered, and on motion adopted :

"*Resolved*, That votes of thanks be tendered the officers of the University for the favors shown us, and especially those connected with the Veterinary Department, in allowing the use of hospital, instruments, material, etc. To our President, Secretary and special local Committee on Arrangements (O. V. Brumley, L. W. Carl, T. B. Hillock) for their untiring efforts in preparing such a creditable programme. To the members who read papers, and to those who performed operations, for their necessary assistance ; for it was to these, taken as a whole, that enabled this session to be made a clinical, literary and social success."

The meeting now adjourned, to meet again at the call of the Secretary, and as each wended his way homeward he felt that his trip had not been in vain ; he had been well paid for his expense and time, and those who had failed to attend had missed one of the best meetings of the Ohio State Veterinary Medical Association. WM. H. GRIBBLE, D. V. S., *Secretary*.

ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.

The twentieth semi-annual meeting was held at the Hotel Fey, Peoria, Ill., February 19, 1902, and was called to order by President Joseph Hughes.

The following members were present : Drs. Albert Babb, Springfield ; L. C. Tiffany, Springfield ; D. E. Kinsella, Chillicothe ; J. T. Nattress, Delavan ; F. H. Ames, Canton ; M. A. Storry, Bradford ; N. J. Stringer, Walseka ; T. J. Gunning, Neponset ; H. A. Pressler, Fairbury ; C. D. Hartman, Peoria ; C. J. List, Havana ; John Scott, Peoria ; W. H. Welch, Lexington ; A. C. Worms, E. L. Quitman, Joseph Hughes, Chicago ; Jas. Smellie, Eureka. Visitors : Drs. M. C. Eckley, Galesburg ; E. D. Yerion, Elmwood ; Jas. Wood, Pekin, and Mr. Louie Rierz, representing Sutcliff & Case, of Peoria.

The minutes of the last meeting were read and approved.

The following applications were received and on motion were duly elected to membership : Dr. L. C. Tiffany, vouchers, Drs. John Scott and T. J. Gunning ; Dr. D. E. Kinsella, vouchers, Drs. John Scott and Jos. Hughes.

Receipts during meeting, $13.00. Bills for stationery and Secretary's fee, for $40.50, were audited and ordered paid. Report of Treasurer showed a balance of $42.85 on hand.

Mr. Rierz, on behalf of the drug firm of Sutcliff & Case, extended an invitation to the association to visit their elegant establishment, which was accepted and the meeting adjourned until 1 P. M.

Dr. Nattress read a report of the following cases: "Trephining Both Sinuses," "Amputation of Rectum," also a remarkable recovery of a dog with leg nearly cut off. Discussed by Drs. List, Quitman and Worms.

Dr. Tiffany gave a splendid talk on "The So-called Cornstalk Disease."

The following resolutions were offered and passed unanimously:

"*Resolved*, That the Illinois State Veterinary Medical Association, in session at Peoria, Feb. 19, 1902, does hereby protest against the custom of compelling graduates of recognized three-year colleges to pass the examination before the State Board of Veterinary Examiners. Also,

"*Resolved*, That we do hereby protest against any professor or instructor connected with any veterinary college in the State serving on the Board of Veterinary Examiners."

The Secretary was instructed to submit the above resolutions to the appropriate boards.

The association reconvened at 1 P. M.

Dr. Albert Babb read an unusually interesting paper on "The Business Relations of the Veterinarian."* Discussed by Drs. Quitman, Stringer, Worms, Scott and Hughes.

Dr. H. A. Pressler read a paper on "A Peculiar Complication of Strangles." Discussed by Drs. Stringer, Quitman, List and Hughes.

Dr. F. H. Ames read the "Reports of Cases," which were very interesting. (1) A peculiar growth below stifle of cow; (2) A case of retained fœtus in womb; (3) A schirrous cord. Discussed by Drs. Stringer, Gunning, Nattress and Welch.

Sec. I., Article II., of By Laws was changed to read "December" instead of "November."

Meeting adjourned to meet in Chicago in December at the call of the President.

W. H. WELCH, *Secretary.*

* Will be published in an early number of the REVIEW.

WISCONSIN SOCIETY OF VETERINARY GRADUATES.

The annual meeting was held at Madison, March 5, at two o'clock P. M., and was called to order by the President, Dr. C. E. Evans. Those present were Drs. W. G. Clark, B. L. Fossee, A. H. Hartwig, R. S. Heere, J. T. Hernsheim, L. N. Jargo, G. Ed. Leech, E. A. McCullough, A. J. Nelson, F. J. Roub, E. D. Roberts, D. Roberts and S. S. Snyder. Visitors were Drs. George E. Allen, Ft. Atkinson, M. H. Reynolds and Dr. S. D. Brimhall, of Minneapolis, Minn.

The Secretary's and Treasurer's reports were read and accepted.

It was moved and seconded that the chair appoint a committee to draw resolutions on the death of Dr. C. H. Ormond. Carried. The President appointed Drs. D. Roberts, Hernsheim and Snyder.

The terms of Drs. Clute and Leech on Committee on Legislation having expired, it was decided that the chair appoint members to fill vacancies.

The application for membership of Dr. A. H. Beckwith, Shullsburg, Wis., was reported favorably, and on motion he was declared elected.

Dr. G. Ed. Leech, having removed to Winona, Minn., requested an honorary membership. On motion, the application was granted.

Dr. F. J. Roub read a report on "Poisoning by Sinapis Nigra,"* which was discussed by Dr. D. Roberts. Dr. Beattie reported a similar case.

On motion, a vote of thanks was tendered the essayist.

On motion, the society proceeded to the election of officers, which resulted as follows:

President—Dr. F. J. Roub, of Monroe.

Vice-President—Dr. R. S. Heere.

Secretary—Dr. S. Beattie.

Treasurer—Dr. S. S. Snyder.

Board of Censors—Drs. B. L. Clark, A. J. Nelson, and H. P. Clute.

On motion the society adjourned to meet at 7.30 P. M.

Reconvened at 7.30 P. M. The President appointed Dr. R. H. Harrison to fill vacancy of Dr. C. H. Ormond in revisionary committee and Dr. S. Beattie to fill vacancy of Dr. G. Ed. Leech on Committee on Legislation.

* Will be published in an early issue of the REVIEW.

On motion, Dr. Ormond was placed on honorary member roll.

Dr. W. G. Clark read a paper by Dr. J. M. O'Reilley on "The Use of Eserine in the Treatment of Colic in the Horse."

On motion discussion closed until next meeting, as essayist was absent.

Drs. M. H. Reynolds and S. D. Brimhall, of Minneapolis, Minn., were present in behalf of the American Veterinary Medical Association, and addressed the meeting, extending invitations to our society to attend that meeting to be held at Minneapolis, September 2 to 4, 1902.

It was moved and seconded that the Secretary send each member of our association an invitation to attend the American Veterinary Medical Association meeting. Carried.

The veterinary laws of Wisconsin were discussed by several members, and it was moved and seconded that the Committee on Legislation frame a bill for a State board, this bill to be presented at our next meeting. Carried.

It was moved and seconded that a committee consisting of Drs. Clute, Roberts and Harrison be appointed to furnish clinical material for our next meeting at Milwaukee. Carried.

Resolutions on the death of C. H. Ormond, of Milwaukee, were read as follows:

WHEREAS, It has pleased the Almighty to remove from our midst our esteemed member, Chas. H. Ormond, and

WHEREAS, The intimate relation and business intercourse with him have been most pleasant, makes it befitting that we publicly record our appreciation of him; therefore, be it

Resolved, That in the loss of C. H. Ormond we lose a friend and valued member of our association and profession. Therefore, be it

Resolved, That the deep sympathy of this association be extended to his relations and friends; and be it further

Resolved, That a copy of these resolutions be forwarded to his relations, spread upon our records, and published in the veterinary journals.

On motion the society adjourned to meet at Milwaukee subject to the call of the President and Secretary.

S. BEATTIE, *Secretary.*

MAINE VETERINARY MEDICAL ASSOCIATION.

The quarterly meeting of this association was held in Waterville, Maine, April 9th, 1902, at the home of Dr. A. Joly, with President Dr. I. L. Salley in the chair.

Owing to the very disagreeable weather and great distance many of the members have to travel in order to attend the meetings, the attendance was not very large; nevertheless Drs. Salley, West, Joly, Freeman and Blakely answered to the roll.

The minutes of the previous meeting were read and approved.

Letters of regret for not being able to attend were received from Dr. F. L. Russell and Dr. J. A. Ness.

Under the head of new business the discussion of a veterinary bill was taken up and Dr. Joly made a motion that the President appoint a Committee on Legislation to consist of eleven members, including the President, to carefully consider and draw up plans for presenting a veterinary bill before the next legislature.

The motion being seconded by Dr. West, the President appointed the following members on that committee: Drs. Russell, Huntington, West, Perry, Goddard, Freeman, Purcell, L. S. Cleaves, Joly and Blakely.

Although the association, in their endeavors to secure the passage of a veterinary bill, have failed time and time again, the members are still unwilling to believe that it is an impossibility, and they intend to try again with renewed vigor and courage, believing that if every member will do his duty, success will crown their efforts.

The last thing in order being the reading of papers, the members had the pleasure of listening to a paper by Dr. W. L. West, of Belfast, entitled, "A Plea for More Careful Diagnoses." The subject was treated in a masterly way and the doctor deserves great credit for the manner in which he handled the subject. The association voted to extend a "vote of thanks" to Dr. West for his efforts, and the hour being late, the members decided to adjourn after concluding to meet in Northport, Maine, on July 9th, 1902. C. L. BLAKELY, M. D. V., *Sec.*

NEW ENGLAND ALUMNI ASSOCIATION OF THE AMERICAN VETERINARY COLLEGE.

The annual meeting and banquet was held April 19, at 6 P. M., at the Copley Square Hotel, Boston, Mass., and a very enjoyable reunion took place. Dr. Madison Bunker, '81, of New-

ton, Mass., occupied the head of the table; upon his right was Prof. Andrew Smith, of Toronto, Can., and Austin Peters, '83, of Jamaica Plain, Mass., while to the left were Profs. James L. Robertson, '76, and Roscoe R. Bell, '87, of New York. On either side of the long table were seated John F. Winchester, '78 (President of the American Veterinary Medical Association), of Lawrence, Mass.; Lester H. Howard, '82, of Boston; George P. Penniman, '77, of Worcester, Mass.; W. L. LaBaw, '90, of Boston; W. H. Dodge, '92, of Leominster, Mass.; W. A. Sherman, '81, of Lowell, Mass.; C. H. Tilton, Jr., '96, of Ashland, Mass.; John J. Riordon, '94, of Beverley Farms, Mass.; and Charles L. Adams, '96, of Danielson, Conn. Addresses were made by Profs. Robertson, Bell and Smith, following which Dr. Winchester delivered a short history of veterinary education in America,* which was much enjoyed, and Dr. Peters detailed the condition of the contagious diseases of animals laws and regulations in the Bay State. Following this Dr. Penniman told of the early efforts at education in this country, and paid a tribute to the memory of the late Prof. Dadd, of Boston; among other things how he met a very heroic death; after saving seven lives from drowning, he lost his own. Drs. Howard and LaBaw also spoke in a pleasing manner, while each one present had a good word to say of their *alma mater* and the perpetuation of her memory through associations like this. When the meeting finally dissolved at 10 o'clock the guests and most of the members repaired to the Horse Show, which was in progress, and enjoyed the occasion very much. It was by far the most enjoyable reunion which the association has ever held, and will do much toward making the next one more largely attended.

ALLEGHENY COUNTY VETERINARY MEDICAL ASSOCIATION.

This young association held well attended monthly meetings during the winter, and accomplished much good committee work, especially in efforts to adopt and establish a scale of fees or charges for professional visits and surgical operations. It was claimed some parties were making a practice of dividing fees with coachmen and others were charging less than customary in this locality.

Drs. Gearhart, Richards, Spindler and Waugh were ap-

* We secured the Doctor's notes upon this subject and will publish them in an early number of the REVIEW.

pointed a committee on resolutions on the death of the late Dr. R. S. Huidekoper.

Drs. Boyd and Spindler presented excellent papers and reported interesting cases in practice.

Dr. A. Leteve, of Magee Pathological Institute, Mercy Hospital, delivered a very interesting and instructive lecture on the latest facts relating to tetanus, including serum therapy combinations, giving favorable results. Drs. McNeil, Meyer and Waugh indulged in general discussion, and Dr. Leteve kindly answered many inquiries.

JAMES A. WAUGH, V. S., *Secretary.*

ALUMNI ASSOCIATION OF THE NEW YORK AMERICAN VETERINARY COLLEGE.

This association met during the afternoon of April 1 in the lecture room of the college, and transacted routine business, with the election of officers.

In the evening a banquet was held at the Hotel Marlborough, 36th Street and Broadway, with a large number in attendance, including delegations from Massachusetts, New Jersey, Pennsylvania, Maryland and other points. It was probably one of the largest and most enjoyable reunions ever held by this association or the ones from which it sprung. Dr. Wm. J. Coates, dean *pro tem.* of the college, acted as toastmaster, and he seemed to have received an inspiration from the God of Mirth, for he spoke in the happiest strain and each introduction of a speaker was the occasion for a witty sally at the prospective orator, putting the entire company in a pleasant humor and adding much to the pleasure of the occasion.

When the cigars were served the toastmaster introduced the Chancellor, Dr. H. M. MacCracken, who responded to the subject of "Universities," in which he spoke words of encouragement to the alumni of the Veterinary Department of New York University, telling them of the efforts being made by the parent in behalf of its offspring, and assuring them that nothing would be left undone to place the veterinary school upon a successful basis. Then Dr. Munn, the veterinarians' good friend, told about "Veterinary Education" in a broad sense, and Prof. J. L. Robertson spoke feelingly upon "Veterinary Science." Dr. Robert W. Ellis elucidated the subject of "Alumni," and Prof. H. D. Gill took up the cause of the "Faculty" and spoke from the standpoint of a member, while the versatile Dr. W. Horace

Hoskins did full justice to the cause of "Journalism," saying among other things, that he hoped to see medical periodicals eliminate the editorial page entirely, filling the journal with good original articles and allowing the reader to draw his own conclusions. We rather imagine that such a publication would be too dry for American readers, and besides many advances in medicine and in the welfare of the profession are brought about through judicious and wise editorial treatment. Dr. Wm. Herbert Lowe was thoroughly qualified to speak upon the subject of "Legislation," and he told the members about the successful efforts of New Jersey in that direction. Following Dr. Lowe's address, Dr. Roscoe R. Bell spoke to the toast of "New Remedies," and then the toastmaster called upon the various diners, who responded in brief and in a pleasing manner. Among these were Drs. Lellman, Satterlee, Ackerman, Howard, Glennon, Shorey, Deronde, Miller, Hasslock, Cramer, McTammany, Burns, T. E. Smith, and Ferster. When the banquet broke up at 12 o'clock it was with the feeling that a most enjoyable reunion of the alumnæ had taken place.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

The membership of the A. V. M. A. is taking general interest in the meeting to be held in Minneapolis next September, and the following have offered contributions for the programme: Dr. F. Torrence, Manitoba; J. S. Anderson, Nebraska; T. D. Hinebauch, North Dakota; W. Horace Hoskins, Pennsylvania; M. E. Knowles, Montana; C. A. Carey, Alabama; N. S. Mayo, Kansas; C. E. Ellis, Missouri; E. A. A. Grange, New York.

The Secretary hopes that all those who have something of value to contribute will communicate with him at the earliest possible moment, that he may arrange a most attractive programme.

The local Committee of Arrangements has selected the West Hotel for official headquarters of the meeting, and as the Minnesota State Fair will be held in Minneapolis during the same week it will be advisable for the membership to make early arrangements for rooms.

NEW JERSEY STATE BOARD OF VETERINARY MEDICAL EXAMINERS.

Governor Murphy has appointed the following Board to act under the new law: Dr. William Herbert Lowe, Paterson (Passaic County); Dr. T. Earle Budd, Orange (Essex County);

Dr. T. E. Smith, Jersey City (Hudson County); Dr. Thos. B. Rogers, Woodbury (Gloucester County); Dr. Whitfield Gray, Newton (Sussex County).

The Board will hold its first meeting at the Capital building in Trenton on the first Monday in May (May 5th).

CONNECTICUT VETERINARY MEDICAL ASSOCIATION.

The regular annual meeting was held at the Hotel Hartford, at Hartford, Tuesday, February 4th, 1902, afternoon and evening.

Dr. E. C. Ross, the President, called the meeting to order at 3 o'clock. The following veterinarians were present: *Members*—Drs. Ross, Lyman, Jackson, Devereau, Witte, Crowley, Whitney, Hyde, Atwood, Keeley, Bland, Bates, Dow, and Donaldson. *Visitors*—Drs. Parkinson, Ingram, McGuire, and Finnegan, also Mr. St. Johns of the *Hartford Times*.

The minutes of the last meeting were read and ordered accepted as written.

The Secretary was instructed to correspond with Gibson & Co., of New York, relative to the association's stone for printing certificates.

Motion was made and carried to give Dr. L. Y. Ketcham, formerly of Woodbury, Conn., a demit, and the Secretary issued same.

Motion made by Dr. Bland, seconded by Dr. Hyde, that those veterinarians present that are not members of the association and are eligible to become members, shall be admitted to free membership upon writing an application of such to the Secretary and depositing one dollar with him. Motion carried.

Drs. Ingram, McGuire, Parkinson and Finnegan were admitted to membership upon the strength of above motion.

Motion made by Dr. Hyde that the changes proposed in the By-Laws at the last meeting be adopted as read from the records, seconded by Dr. Witte. This motion was amended to read: "If the President and Secretary should think it advisable, they should first submit the changes to some competent lawyer to learn if the alterations have been made in a legal manner. Motion carried. Motion made by Dr. Hyde and seconded by Dr. Ingram, that Art. IV be continued on the table until the next meeting. Motion carried.

Motion made by Dr. Lyman, seconded by Dr. Bland, that

the candidates before signing the Constitution and By-Laws shall present to the Secretary the Treasurer's receipt for his initiation fee of one dollar; and for his certificate of membership shall pay an additional fee, hereafter to be provided for, that shall defray the expenses incurred in the issuing of such certificate as may be provided by this association for members. Motion carried.

Treasurer's report was read by Dr. Whitney, and it was voted to adopt the report as presented.

Motion was made by Dr. Bland and seconded by Dr. Ingram that this association adopt resolutions upon the death of Dr. Huidekoper, of Philadelphia, and Dr. Prophet, of Suffield, and that these resolutions be sent to the veterinary journals * and placed on the records of the association, and that the Secretary be instructed to draw up said resolutions. Motion carried.

Dr. J. F. Ladue, of New Haven, made application for membeship. Vouched for by Dr. Whitney. Dr. Ladue was found to be qualified by board of censors and admitted to membership.

Dr. E. H. Lehnert, of the Connecticut Agricultural College, at Storrs, made application for membership. Vouched for by Dr. Lyman. Secretary was instructed to inform Dr. Lehnert that if he would send the necessary fee he would be enrolled as a member.

Neither the President, Dr. Ross, nor Dr. Lyman, the Secretary, could be induced to accept renomination, though it was the earnest wish of all the members present that they should serve for another year.

The election of officers resulted as follows:

President—Dr. Andrew Hyde, Norwalk.

First Vice-President—Dr. Thomas Bland, Waterbury.

Second Vice-President—Dr. Harrison Whitney, New Haven.

Secretary—Dr. B. K. Dow, Willimantic.

Treasurer—Dr. E. C. Ross, New Haven.

Board of Censors: Drs. H. E. Bates, S. Norwalk; P. T. Keeley, Waterbury; F. A. Ingram, Hartford; G. H. McGuire; New Britain: R. D. Martin, Bridgeport.

It was voted to hold the next meeting of the association at Hartford the first Tuesday in August.

Dr. Whitney mentioned that Dr. Nathan Tibbals wanted to dispose of his library of veterinary works, and as Dr. Mayo, who had had the matter in hand had discontinued his services

* Published in March REVIEW.

at Storrs, Dr. Whitney was instructed to correspond with Dr. Lehnert relative to the library.

A recess of ten minutes was declared. After the recess Dr. Hyde read a paper on "Milk Inspection,"* the discussion of which was left over, as well as the other papers, until the next meeting.

Motion made and seconded that meeting adjourn, which was done. B. K. Dow, *Secretary.*

NEWS AND ITEMS.

GREAT BRITAIN, it is stated, has spent $25,000,000 in this country for horses and mules.

DR. ELISHU HANSHEW, of Brooklyn, N. Y., has purchased and occupied a new infirmary at 125 and 127 Carlton Avenue.

DR. GEORGE H. BERNS, of Brooklyn, N. Y., is taking the spring bacteriological course at the Hoagland Laboratory, in that city.

DR. JOHN M. PARKER, formerly of Haverhill, Mass., is serving the British government in a responsible veterinary position in charge of remounts in Cape Colony, South Africa.

"LORD BRILLIANT," Dr. John L. Wentz's grand little high stepper, received his 400th blue ribbon at the Boston Horse Show on April 19, and his 60th championship. He was purchased a few years ago for $145.

DR. WILLIAM SHEPPARD, of Sheepshead Bay, N. Y., acted as veterinarian to the recent Brooklyn Horse Show, and Drs. Howard, Plaskett, and Blackwood acted in a similar capacity for the Boston Show, while Prof. Andrew Smith officiated at the latter exhibition as one of the judges.

SO FAR AS WE KNOW, New Jersey holds the record for celerity in passing a veterinary regulating law. The bill was introduced Feb. 17 and was approved by the Governor on March 17 (just one short month).

"PARTURIENT PARALYSIS" is the subject of Bulletin No. 21 of the Florida Agricultural Experiment Station, prepared by Dr. Charles F. Dawson, Station Veterinarian, and recommends the Schmidt treatment, with full directions, at the same time condemning all forms of drenching.

DR. COLEMAN NOCKOLDS, 1st class Vet., U. S. Army, Batangas, Philippines, has been seriously ill with dysentery, but is much better. He employed his convalescent period in pre-

* Published in March and April numbers of REVIEW.

paring an excellent paper on "Some Wounds of War," for REVIEW readers. The first installment has been received, and will soon begin publication.

DR. PETERS APPOINTED CHIEF OF MASSACHUSETTS CATTLE BUREAU.—"Dr. Austin Peters, chairman of the late Cattle Commission, now becomes Dr. Austin Peters, Chief of the Cattle Bureau of the State Board of Agriculture. It is a case of an old head with a new title and a new office, and it is reasonably safe to anticipate that the functions of the new office will be discharged with the same skill and fidelity as characterized the conduct of the old one. This is the first appointment under Gov. Crane's consolidation programme, and it will do for a sample."—(*Boston Herald, March 27.*)

JUST WHAT SHOULD BE DONE.—"Of course, you get lots of suggestions how to run a journal. Now, original articles and papers read at the different society meetings are very interesting and often valuable, but these often contain the opinions of the individual practitioner. If it were possible, the opinions and experiences of those practitioners who enter into the discussions of the many papers would be of immense benefit and a source of great information to your subscribers. It seems to me that if a suggestion were given to the secretaries of the different associations, many of them would go to the pains of noting the most important features of these discussions and so enhance the value of your journal immensely."—(*A. S. Williams, Marysville, Cal.*)

MR. A. S. SHEALY, who has been assisting Dr. G. E. Nesom, Veterinarian to the South Carolina Experiment Station, at Clemson College, S. C., for the past year, has secured leave of absence for the coming year to finish his course at the Iowa State College. His place will be vacant after Sept. 1st, 1902, and it is desired that an assistant be employed to fill the vacancy by the first of June. The position may prove permanent. The work consists of State inspection of diseased animals, experiment station work and teaching in the short course in veterinary medicine. The salary has not been definitely decided, but will pay a fair salary for the right man.

"AS LONG AS A FLOUR BARREL."—It is probable that at first thought most persons would be inclined to doubt the accuracy of the old saying that a horse's head is as long as a flour barrel. Flour barrels vary somewhat in length. Some are made stouter and shorter, some slender and a little higher. An average flour barrel is about twenty-nine inches in height. Three horses were measured. One of these horses was said to have

rather a large head for its size ; it wasn't a very big horse. This horse's head, exclusive of the ears, measured 28 inches in length. The heads of the two other horses, which were of an average size, with average heads, measured, one, 27 inches, the other 27½ inches. So that it appears that the old saying is substantially true.

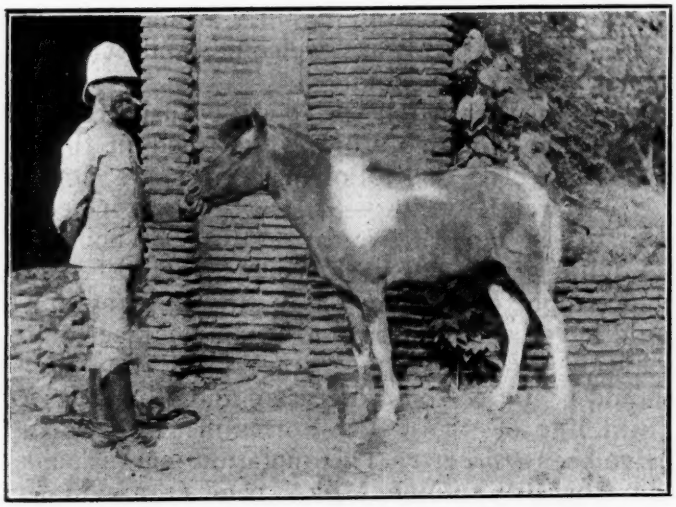
THE HOOD FARM, near Lowell, Mass., probably the most extensive home of prize-winning Jersey cattle in America, was visited by a party of veterinarians, including Profs. J. L. Robertson and Roscoe R. Bell, Drs. J. F. Winchester and W. A. Sherman, on April 20th. Dr. Sherman is veterinarian to the farm, and his guests were shown much courtesy by the Superintendent, Mr. Carpenter, who had caused to be prepared a delicious luncheon for them, after which every detail of the establishment was gone through, including the extensive piggery of some 300 Berkshires. The systems of feeding and care are as near perfect as it is possible to get them, and the sanitation and ventilation are more carefully and intelligently arranged than we have ever seen. Visitors are always welcome, and it is very well worth a long journey to behold.

ERRATA.—In the article on "Milk Inspection," by Dr. Andrew Hyde, of Norwich, Conn., published in the REVIEW for March and April, the following errors are noted by the author : In March REVIEW :—(*a*) On page 977 in second paragraph next to last line, the word "necessity" should be *necessities ;* (*b*) In line 5, page 980, "dairymen" should be *dairyman ;* (*c*) The apostrophe over "cow's" in line 2, paragraph 2, page 982, should have been omitted and a comma placed after *cows.* April REVIEW :—(*a*) Page 11, paragraph 5, line 5, "33 per cent." should be 3.3 *per cent.* of casein and albumine ; (*b*) Page 15, in third line of "Test for Formalin," the word "race" should have been *trace ;* (*c*) The quotation marks enclosing the heading "How to Examine Milk," page 11, are unnecessary ; the same applies to heading "Preventive Inspection," page 16.

DR. KOCH DISPROVED BY A HIGH AUTHORITY.—The following dispatch was published in the press of the country as the REVIEW went to press : "*Berlin, April 30.*—Advance sheets of Professor Behring's forthcoming book on tuberculosis in cattle were available here to-day. From these sheets it is seen that in his book the professor details the results of six years' investigations assisted by Drs. Ruppel and Roemer. Professor Behring affirms that tuberculosis in man and cattle is propagated by identical bacilli, and that the seeming differences between the

human and the cattle bacilli result from the capacity of the bacilli to accommodate themselves to the organism in which they live. The writer explains the process by which he reaches the conclusion that chemically and physiologically, the tubercle bacilli in man and cattle are of the same species. Professor Behring says he has successfully infected cattle with virus from humans, producing thereby fatal animal tuberculosis. He also says he has discovered a method to render cattle immune against tuberculosis, which is done by vaccinating them when young. This he declares to be his greatest discovery, and says the method is already in use. He alluded to this method of inoculating cattle in his speech at Stockholm, when awarded one of the Nobel prizes."

AN AMERICAN VETERINARIAN UNDER A TROPICAL SUN.—Although we are violating the confidence of a valued collaborator of the REVIEW, we could not resist the impulse to reproduce the accompanying photo, forwarded to us as a private



token of remembrance by Dr. Olof Schwarzkopf, of the Third U. S. Cavalry, located at Vigan, Luzon, P. I. He has so many friends in America, and particularly among REVIEW readers, that we know they will enjoy a glimpse of the genial veterinarian fondly caressing his trusty pony, who appears to be about the size of an ordinary yearling. He reports that, although he suffered greatly from the tropical sun he is now doing well, and hopes soon to return to America.

REMOVAL OF GUNPOWDER STAINS.—On Christmas day a boy of twelve filled a vaseline bottle with powder and exploded

the same. I arrived on the scene about three hours after the accident and found the cornea and sclerotic of both eyes and the face literally blown full of powder. I removed a dozen or more flakes of powder from each cornea with a foreign spud; also removed the powder from the sclerotic. Did the operation under a four per cent. solution of cocaine. After the operation I used a fifteen per cent. solution of hydrozone in the eyes. After removing the particles of glass from the face I kept a cloth over it saturated with a fifty per cent. solution of hydrozone. At the end of two weeks I used a saturated solution of boric acid in the eyes and painted the face twice daily with equal parts of hydrozone and glycerin. The eyes are well and powder stains have disappeared from the face.—(*Dr. E. G. Corbett, Hampton, Fla., in Medical World, Feb., 1902.*)

NOT AN UNCOMMON INCIDENT.—It was on a Vanderbilt Avenue [Brooklyn] car, and the sympathies of the passengers were keenly aroused by the evident suffering of a fashionably dressed woman revealed in an audible conversation with her equally stylish companion. Said the latter: "Oh, my dear, I am so grieved to hear of your trouble! Is there nothing you can do for him?" "Isn't it dreadful?" replied the first. "He is so ill, and we have tried every remedy. It breaks my heart. You know, last year we thought a change of air would benefit him, so we found an ideal place to spend the summer, and it seemed as if he must get well. Such delicious atmosphere, rippling water and cool, green grass." "And didn't he improve?" "No, poor fellow, and we don't know what to do. We are going to pack up very early this year and go away about May 1, but I am so afraid it will be of no use." "My dear," advised the first speaker," "why do you not cousult Dr. ———, of New York? He's an authority on just such troubles, and I feel sure he could help him." "Perhaps. It's the only thing to do. We seem to have tried everything else. Oh!" with a little sob, "I don't believe I could bear it if he should die." By this time the listening passengers were almost in tears, so acute was the sorrow of the poor lady. It was pitiful. Her companion, too, was equally affected. "My dear," she exclaimed, "will you let me speak quite frankly and tell you what I think is the cause of the whole trouble?" The other nodded sadly, and she continued impressively: "I am afraid you give him bones. Now, we never give Dewey bones, and he's the healthiest dog in the city."—But the passengers had fled.—(*New York Herald.*)

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WE would call the attention of REVIEW readers to the contents of the library of the late Dr. Thomas F. Barron, of Baltimore, listed on page 14 (ad. dept.) of this number. It will be seen to be an interesting list of books, as what are not modern and up to date are sufficiently old and rare to make them attractive, and we would advise any of our friends desiring any part of this library to apply for them at once, as Mrs. Barron intends selling them without delay.

IT is said by those in a position to know by practical experience that the most perfect and simple method of practising artificial impregnation in the mare is by conveying the seminal fluid to the uterus in a *gelatine capsule*, which is filled in the vagina of them are en route to the uterus, the mare having been previously served by the stallion. The strong little *one ounce rectal capsule*, made by H. Planten & Sons, were used in the demonstrations, from which impregnation was accomplished.

THOSE veterinarians who have not yet employed Epicarin-Veterinary as a dermal parasiticide have missed one of the "good things" in veterinary practice. They can obtain it and many other excellent pharmaceutical products not found elsewhere, from *Farbenfabriken of Elberfeld Co.* (see ad. dept.)

"A STITCH IN TIME" has been the secret of success in many undertakings; but it has reached the "climax" when in "the Consolidated Hoof Pad Co.'s" "Rubber Horse-Shoe Pad."

WE wonder if the veterinary profession fully appreciates the variety and value of the Buntin Drug Co.'s long list of veterinary hypodermic tablets.

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